TWENTY-FOURTH ANNUAL REPORT

OF THE

BOARD OF TRUSTEES

OF THE

OHIO STATE UNIVERSITY

TO THE

GOVERNOR OF OHIO

FOR THE YEAR

ENDING

JUNE 30, 1894.

Board of Trustees.

		Term Expires
LUCIUS B. WING	Newark	May 13, 1895.
THOMAS J. GODFREY	Celina	" 1896.
JOHN B. SCHUELLER	Columbus	" 1897.
ROSS J. ALEXANDER	Bridgeport	" 1898.
WM. I. CHAMBERLAIN	Hudson	" 1899.
DAVID M. MASSIE	Chillicothe	" 1900.
JOHN T. MACK	Sandusky	" 1901.

OFFICERS OF THE BOARD.

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DAVID M. MASSIE	*Vice President*
ALEXIS COPE	*Secretary.*
FRED. W. PRENTISS	*Treasurer.*

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T. J. GODFREY.	JOHN T. MACK;	T. J. GODFREY.

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T. J. GODFREY, W. I. CHAMBERLAIN, JOHN T. MACK.

Members of the Faculties.

*INSTRUCTORS AND OFFICERS.

WILLIAM HENRY SCOTT, LL. D., University Grounds.
PRESIDENT, and Professor of Philosophy.

EDWARD ORTON, PH. D., LL. D., 100 Twentieth Street.
Professor of Geology.

SIDNEY A. NORTON, PH. D., LL. D., 363 East Town Street.
Professor of General and Applied Chemistry.

NORTON S. TOWNSHEND, M. D., University Grounds.
Professor *Emeritus* of Agriculture.

†STILLMAN W. ROBINSON, C. E., 1353 Highland Street.
Professor of Mechanical Engineering.

NATHANIEL W. LORD, E. M., 1175 Highland Street.
Professor of Mining and Metallurgy.

SAMUEL CARROLL DERBY, M. A., 93 Fifteenth Avenue.
Professor of the Latin Language and Literature.

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Professor of Horticulture and Forestry.

JOSIAH RENICK SMITH, M. A., Fifteenth and Indianola Avenues.
Professor of the Greek Language and Literature.

HENRY A. WEBER, PH. D., 1342 Forsyth Avenue.
Professor of Agricultural Chemistry.

BENJAMIN FRANKLIN THOMAS, PH. D., University Grounds.
Professor of Physics.

GEORGE WELLS KNIGHT, PH. D., University Grounds.
Professor of History and Political Science, and Professor of Constitutional Law in the School of Law.

HENRY J. DETMERS, M. V. D., 1315 Neil Avenue.
Professor of Veterinary Surgery.

ROSSER DANIEL BOHANNAN, B. Sc., C. E., E. M., 16th and Indianola Avenues.
Professor of Mathematics and Astronomy.

*The names of Professors and Associate Professors (including Director of the Industrial Department, Director of the Department of Clayworking and Ceramics, and Librarian) Professors in the School of Law, Assistant Professors, Lecturers and Assistants, are placed in their appropriate groups in the order of appointment to present rank and length of service in the University.

† Absent on leave.

DAVID SIMONS KELLICOTT, PH. D., 1332 Highland Street.
Professor of Zoology and Entomology.

C. NEWTON BROWN, C. E., 1343 Forsyth Avenue.
Professor of Civil Engineering.

ERNST AUGUST EGGERS, 644 Franklin Avenue.
Professor of the German Language and Literature.

ALBERT M. BLEILE, M. D., 218 King Avenue.
Professor of Anatomy and Physiology.

EUGENE T. WILSON, 2d Lieut. 1st Artillery, U. S. A., 281 East Broad Street.
Professor of Military Science and Tactics.

WILLIAM A. KELLERMAN, PH. D., 175 West Eleventh Avenue.
Professor of Botany.

THOMAS FORSYTH HUNT, M. Sc., 188 West Tenth Avenue.
Professor of Agriculture.

ARTHUR LYMAN WILLISTON, S. B., 652 Franklin Avenue.
Director of the Industrial Department.

REV. ALLEN CAMPBELL BARROWS, A. M., D. D., 54 West Second Avenue.
Professor of English Literature.

GEORGE BEECHER KAUFFMAN, B. Sc., 66 Twenty-First Street.
Professor of Pharmacy.

BENJAMIN LESTER BOWEN, PH. D., 21 Douglass Street.
Professor of the Romance Languages and Literatures.

JOSEPH VILLIERS DENNEY, B. A., Sixteenth and Indianola Avenues.
Professor of Rhetoric and Secretary of the University Faculty.

EDWARD ORTON, JR., E. M., 36 North Monroe Avenue.
Director of the Department of Clayworking and Ceramics.

JOSEPH NELSON BRADFORD, M. E., 54 West Tenth Avenue.
Associate Professor of Drawing.

OLIVE JONES, 71 West Eleventh Avenue.
Librarian.

ROBERT IRVING FULTON, A. M., Delaware, O.
Lecturer on Elocution and Oratory.

WILLIAM F. HUNTER, { 1032 East Town Street. / 18 Board of Trade.
Dean of the School of Law, Professor of the Law of Sales, Bailments, Evidence, Wills, Probate Practice, Construction of Contracts and Judge of Moot Courts.

GEORGE K. NASH, B. A., { 43 Jefferson Avenue. / 36 Board of Trade.
Professor of the Law of Torts.

DAVID F. PUGH, { 1320 Highland Street. / Court House.
Professor of Equity Jurisprudence.

I. N. ABERNETHY, Circleville.
Professor of Criminal Law, the Law of Extraordinary Legal Remedies, and Circuit and Supreme Court Practice.

JAMES H. COLLINS, { 57 Lexington Avenue. / Y. M. C. A. Building.
Professor of the Law of Corporations and Federal Practice.

ORLANDO W. ALDRICH, LL. D., D. C. L., 101 North High Street.
Professor of the Law of Real Property and Mortgages, Office Practice, Conveyancing, and the Study of Cases.

RUTHERFORD H. PLATT, B. A., LL. B., { 414 East Broad Street. / 13½ East State Street.
Professor of the Law of Pleading and Practice.

J. PAUL JONES, B. A., { 1194 East Town Street. / 23½ East State Street.
Professor of the Law of Contracts.

EMILIUS OVIATT RANDALL, B. PH., LL. M., { 1025 East Oak Street. / 35½ North High Street.
Professor of Commercial Law.

HORACE LAFAYETTE WILGUS, M. SC., { 81 West Frambes Avenue. / 5 North High Street.
Professor of Elementary Law and Secretary of the Faculty of the School of Law.

GEORGE W. McCOARD, M. A., 1322 Neil Avenue.
Assistant Professor of Mathematics.

†FREDERICK W. SPERR, E. M., 1461 Worthington Street.
Assistant Professor of Mining Engineering.

WILBUR HENRY SIEBERT, M. A., 57 West Tenth Avenue.
Assistant Professor of History.

WILLIAM McPHERSON, JR., M. SC., Fifteenth and Indianola Avenues.
Assistant Professor of General Chemistry.

FRANCIS CARY CALDWELL, B. A., M. E., 191 King Avenue.
Assistant Professor of Physics.

HENRY CURWEN LORD, B. SC., 169 King Avenue.
Assistant Professor of Astronomy and Mathematics.

*FRANK A. RAY, E. M., The Normandie.
Assistant Professor of Mining Engineering.

DEWITT GOODRICH, Climbing Hill, Iowa.
Assistant Professor of Dairy Husbandry.

B. B HERRICK. Wellington, O.
Lecturer on Cheese-Making.

WILLIAM C. McCRACKEN, 91 West Frambes Avenue.
Lecturer on Care of Boiler and Engine.

WARREN K. MOOREHEAD, 1080 Madison Avenue.
Curator of the Archæological Collections.

CHARLES WALTER MESLOH, B. A., 9 Lyndon Block, Fifth Ave. and High St.
Assistant in German.

JOSEPH RUSSELL TAYLOR, B. A., 191 King Avenue.
Assistant in Rhetoric.

CHARLES LINCOLN ARNOLD, M. SC., 239 West Tenth Avenue.
Assistant in Mathematics.

CHARLES B. MORREY, B. A., University Grounds.
Assistant in Physiology.

CLAIR ALBERT DYE, G. PH., 135 King Avenue.
Assistant in Pharmacy.

LLOYD MORRIS BLOOMFIELD, B. AGR., University Grounds.
Assistant in Agricultural Chemistry.

FRANK J. COMBS, 1173 Franklin Avenue.
Assistant in the Industrial Department and Foreman of the Forge Room.

EDWARD A. KEMMLER, C. E., 888 City Park Avenue.
Assistant in Civil Engineering.

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†Resigned.
*Assumed duties October 15, 1894.

JAMES ELLSWORTH BOYD, B. Sc. — 159 West Frambes Avenue.
Assistant in Physics.

PAUL FISCHER, B. Agr., D. V. M., — 525 East Main Street.
Assistant in Veterinary Medicine.

EMBURY A. HITCHCOCK, M. E., — 191 King Avenue.
Assistant in Mechanical Engineering.

FLORENCE BASCOM Ph. D., — Fifteenth and Indianola Avenues.
Assistant in Geology.

CHARLES W. WEICK, — 30 East Ninth Avenue.
Assistant in the Industrial Department and Foreman of the Carpenter and Pattern Shops.

WILLIAM A. KNIGHT, — 206 West Lane Avenue.
Assistant in the Industrial Department and Foreman of the Machine Shops.

DAVID S. WHITE, D. V. M., — 1349 Hunter Street.
Assistant in Veterinary Medicine.

FRANKLIN P. STUMP, B. Agr. — University Grounds.
Assistant in Agriculture and Foreman of the Farm.

THOMAS EWING FRENCH, — Worthington Street.
Assistant in Drawing.

NEWTON HENRY BROWN, M. E., — 114 Norwich Avenue.
Assistant in Physics

CHARLES ROGER WATSON, A. B., — 106 North Grant Avenue.
Assistant in French and Latin.

PITT GORDON KNOWLTON, M. A., — 448 West Sixth Avenue.
Assistant in Philosophy.

JAMES ALVA WILCUS, A. M., — 1573 Summit Street.
Assistant in History.

JOSEPH C. RITCHEY, B. Sc. — University Grounds.
Assistant in General Chemistry.

THOMAS KENYON LEWIS, B. Sc., — 32 West Ninth Avenue.
Assistant in Drawing.

OSCAR J. BAILEY, — Tacoma, O.
Assistant in Butter Making.

HARRIET TOWNSHEND, — University Grounds.
Assistant Librarian

KARL DALE SWARTZEL, M. Sc., — 57 West Frambes Avenue.
Fellow and Assistant in Mathematics.

JAMES HOWARD McGREGOR, B. Sc., — 234 West Tenth Avenue.
Fellow and Assistant in Zoology and Entomology.

*CHARLES WILLIAM FOULK, B. A., — University Grounds.
Fellow and Assistant in Mining and Metallurgy.

CHARLES WILLIAM DAVIS, E. M., — 204 West Fourth Avenue.
Fellow and Assistant in Mining and Metallurgy.

STATE GEOLOGIST.

Professor EDWARD ORTON.

STATE SEALER OF WEIGHTS AND MEASURES.

The Professor of Physics, *Ex Officio.*

* Resigned.

COLUMBUS, O., *June 30, 1894.*

To His Excellency, GOVERNOR WM. MCKINLEY:

SIR: I have the honor to transmit herewith the twenty-fourth annual report of the Board of Trustees of the Ohio State University.

Very respectfully, your obedient servant,

ALEXIS COPE, *Secretary Board of Trustees.*

Report of Trustees.

OFFICE OF THE BOARD OF TRUSTEES,
OHIO STATE UNIVERSITY,

COLUMBUS, O., *June 30, 1894.*

Hon. WM. MCKINLEY, *Governor of Ohio:*

SIR: In compliance with law, the board of trustees respectfully submit the twenty-fourth annual report of the Ohio State University, it being for the year ending June 30, 1894.

ENDOWMENT.

The part of the irreducible debt of the state which forms the endowment of the University was, at the date of the last report, June 30, 1893, $545,504.52, upon which the annual interest was $32,730.27.

Under the operations of the act of the general assembly of March 14, 1889, entitled "An act to quiet title to unpatented lands in the Virginia military district of Ohio," the following additions have been made thereto: August 12, 1893, $1.17; November 16, 1893, $77.50; March 31, 1894, $524.00; May 23, 1894, $48.00; May 28, 1894, $47.75; total, $697.67; making the endowment fund June 30, 1894, $546,202.17, upon which the annual interest is $32,772.13.

RECEIPTS AND DISBURSEMENTS.

The receipts and disbursements for the year ending June 30, 1894, have been as follows:

RECEIPTS.

Balance in hands of treasurer, June 30, 1893	$7,739 26	
Interest on endowment	32,729 77	
State levy	85,493 67	
State appropriations	585 76	
Congressional appropriations (act of 1890)	19,000 00	
Rents	1,800 00	
Gas	199 50	
Virginia military lands	42 00	
Term and laboratory fees of students	17,871 18	
Sale of bonds	10,000 00	
Premium on exchange of bonds	3,125 00	
Incidentals	145 99	
Advanced by treasurer	5,051 56	
		$183,783 69

DISBURSEMENTS.

Salaries	$88,611 23	
Expenses, trustees	752 71	
Repairs	5,248 71	
Fuel and light	4,109 59	
Library	1,009 78	
Printing and advertising	3,331 07	
Virginia military lands	171 00	
Roads and grounds	592 19	
Furniture	444 23	
Electric power plant	7,253 81	
Laboratory supplies	3,515 24	
Apparatus	4,501 72	
Equipment of Hayes hall	11,535 60	
Completion and equipment of Orton hall	21,782 56	
Steam heating plant	785 36	
School of law	3,985 00	
Testing laboratory	2,852 61	
Ohio agricultural experiment station	5,000 00	
Interest on bonds	6,600 00	
Student janitors	1,605 34	
Additional firemen	1,088 32	
General supplies	699 38	
Hauling and express	487 55	
Removing and fitting up museum and library	214 82	
Commencement expenses	243 78	
Special lectures in agriculture	179 60	
Expenses visiting high schools	43 00	
Water rents	434 96	
Plan of grounds	351 00	
Telephone service	250 00	
Cases, archæological collection	188 00	
Band instruments	192 00	
Standard weights and measures	454 56	
Fire hose	132 00	
Postage	301 80	
Miscellaneous disbursements	1,935 17	
		183,783 69

A detailed statement of such receipts and disbursements is given in the treasurer's report filed herewith.

NEW MORRILL FUND.

The following is a statement of the receipts and disbursements of the appropriations made by act of Congress approved August 30, 1890, and known as the "New Morrill Fund."

RECEIPTS.

Balance in hands of treasurer June 30, 1893	$130 75	
Appropriation for year ending June 30, 1894	19,000 00	$19,130 75

DISBURSEMENTS.

For instruction and facilities in agriculture	$3,186 76		
" " mechanical arts	11,887 76		
" " English language	380 00		
" " mathematical science	545 00		
" " physical science	2,769 97		
" " economics	315 00		
		19,084 49	
Balance June 30, 1894			$46 26

The law of congress requires a detailed annual report of the receipts and expenditures of this fund. Such report for the year ending June 30, 1894, is attached to the treasurer's report.

VIRGINIA MILITARY LANDS.

Up to June 30, 1893, the total cash receipts from the sale of Virginia military lands granted to the University by act of the general assembly of March 26, 1872, were	$64,920 26		
Receipts for year ending June 30, 1894	42 00	$64,962 26	
The expenses incident to the disposition of said lands up to June 30, 1893, were	$22,491 12		
Such expense for year ending June 30, 1894	171 00	22,662 12	
Leaving net cash receipts from this source		$42,300 14	
Of this sum there has been paid into the endowment fund	$13,665 14		
And for building and maintaining residences for the professors under act of April 17, 1882	18,826 52	32,491 66	
Leaving a balance June 30, 1894		$9,808 48	
Up to June 30, 1893, the additions to the endowment under the operations of the act of March 14, 1889, entitled "An act to quiet title to unpatented lands in the Virginia military district of Ohio," were	$7,663 06		
Additions from this source during year ending June 30, 1894, were	697 67		
Making total additions to endowment fund under said act,		$8,360 73	

At the last session of the general assembly an act was passed amending the act of April 21, 1893, entitled "An act for the relief of certain persons who formerly held land in the Virginia military district of Ohio," so as to provide that where claims have been heretofore or shall hereafter be allowed, under the provisions of such act, "the auditor of state shall add the amount thereof to that part of the irreducible debt of the state which constitutes the endowment fund of the Ohio state university." Under this provision the endowment fund will receive an addition of $1,296. That being the amount of such claims heretofore allowed.

The recommendation contained in the last report, that the duties devolved on the commissioners named in said act be transferred to the trustees of the University is hereby renewed.

The suits growing out of the acceptance of the board of trustees of the provisions of the act of March 14, 1889, have not come to trial and are still pending.

THE PAGE WILL.

In the annual report for the year ending November 15, 1892, mention was made of the fact that the late Hon. Henry F. Page, of Circleville, Ohio, died October 27, 1891, and by his will, which was probated November 6, following, devised the greater portion of his estate, consisting of valuable farming lands in Pickaway county, Ohio, and Champaign county, Illinois, to the Ohio state university, subject to the life estates therein of his widow and only child and heir-at-law, Miss Isabel Page, each of whom was to receive one-half the income thereof during her life. On the death of the daughter, one-half such income was to go to the university. The devise to the university, however, was made subject to ratification by the daughter. On the fifth day of December, 1891, Miss Isabel Page, of her own volition, formally ratified and confirmed the devise to the Ohio state university, and granted and conveyed to it the lands described in the will. On the fourth day of August, 1893, Miss Isabel Page died, and under the terms of the will and the deed of ratification and confirmation above mentioned, the university became immediately entitled to one-half the income of the lands mentioned in such devise. The collateral kindred of the testator, however, set up a claim that the devise to the university and the deed of ratification were invalid, and on or about December, 1893, filed suits in Ohio and Illinois asking that such deed of ratification be set aside and canceled and the will construed in their favor. The trustees have employed counsel to look after the interests of the university in these suits, and answers in both cases have been filed. One of the cases has been tried and submitted to the court and an early decision is expected.

BONDED INDEBTEDNESS.

An act of the general assembly passed April 15, 1892, authorizing the board of trustees "for the purpose of providing for the erection and equipment, including electric light and power, of the buildings then under contract," to issue from time to time certificates of indebtedness to an amount not exceeding in the aggregate one hundred and twenty thousand dollars" in anticipation of the annual levy of one-twentieth of a mill provided by the act of March 20, 1891, provided that the amount of such certificates payable in any one year should not exceed the sum of thirty thousand dollars and the whole amount issued should be paid on or before June 30, 1897.

Under and pursuant to said act, certificates of indebtedness to the amount of $100,000, were issued June 1, 1892, payable $20,000, June, 1, 1894; $20,000, June 1, 1895; $30,000, June 1, 1896, and $30,000, June 1, 1897; the premium received therefor being $6,150.

On the 12th day of July, 1893, $10,000 additional certificates payable June 1, 1895, were sold at par. On the thirteenth of March of the pres-

ent year, the general assembly passed an act authorizing the refunding of such certificates, and pursuant to said act, on the first day of June, 1894, the same were refunded, the premium received on the exchange being $3,125. The new issue of $110,000 matures $10,000 each year beginning June 1, 1895, and ending June 1, 1905.

ELECTRIC POWER AND LIGHT PLANT.

The specifications for Orton hall provided for its ventilation by means of a fan opening into the tower, impelled by an electric motor, and the plans for equipping Hayes hall contemplated the purchase of a steam engine to furnish the power for driving the machinery. Consideration of the best means of supplying the power needed in these buildings led to the investigation of the subject of electric power for both these buildings and its application to the various general requirements of the university.

In this connection were considered, also, the equipment of a testing laboratory for the department of mechanical engineering and the furnishing of electric light for the various buildings.

Plans and estimates were submitted by Professors Robinson and Thomas, which contemplated the institution of a central power plant to be located in the machine room of the mechanical laboratory, with circuits to the various buildings through the tunnel of the steam heating plant. This plan was finally adopted. A 100-horse power engine and a large dynamo were purchased and located as above recommended. Circuits were laid to Orton and Hayes halls, to the chemical laboratory and to the farm. Motors were also purchased for the machine and forge rooms at Hayes hall, for the mechanical laboratory, for the fan in Orton hall and for driving the machinery at the farm barn. The ventilating fan at Hayes hall and the chemical laboratory had before this been run by small steam engines. These were replaced by street railway motors, secured by Professor Thomas as a loan from the General Electric Company, and the engines were transferred to the testing laboratory.

As a result, electric power is now supplied to nearly all the departments of the university where power is needed, and a handsome advance is made in the direction of a well equipped testing laboratory. At the same time the power circuits were laid, light circuits were also established, and the generous loan by the Westinghouse Electric and Manufacturing Company of Pittsburgh of a 600 light alternating current machine, which is located at the central power plant, made it possible to supply incandescent lights for Orton and Hayes halls, and for temporary use in the main and some of the other buildings. The cost of the installation of this plant was $7,253.81.

It has been the aim to make this plant as complete and efficient as practicable, for general purposes, and at the same time a means of instruction and illustration for the students in steam and electrical engi-

neering. The engine and power generator were mounted and connected up by engineeer McCracken, while the main part of the electrical work was done by students in the electrical engineering course under the direction of Assistant Professor Caldwell.

TESTING LABORATORY.

The removal of the shop and forge room from the old mechanical laboratory to Hayes hall, made it possible to provide for the higher work in mechanical engineering.

On the recommendation of President Scott, the sum of $3,000 was placed under the direction of Professor Robinson for the fitting up of a testing laboratory for said department. This sum has been wisely expended in the purchase of suitable machinery and apparatus for the purpose, and various manufacturers have supplemented the appropriation so generously by gifts and liberal reductions in prices of machinery that a fairly good start has been made in its equipment. Much remains to be provided, however, before such laboratory is complete in every respect.

The expansion of the work of the department of mechanical engineering and the use of a large portion of its floor space for the central power plant, emphasises the coming need of a more commodious and larger building for its accommodation.

The ideal provision would be an engineering building where all the engineering departments could be accommodated.

We hope at no distant day to see such provision made.

HAYES HALL.

Under the supervision of Professor Arthur L. Williston, director of the industrial department, the machinery and appliances necessary for the work of this department were installed in a satisfactory manner, and the shops were open for the reception of students at the beginning of the university year.

The forge room has been provided with twenty-one forges and as many anvils with the necessary tools; the necessary power for blast and ventilation being furnished by an electric motor.

The carpenter and pattern making shop has been furnished with twenty wood turning lathes, the necessary complement of other machinery and tools and with twenty-four convenient benches.

The machine shop has been equipped with needed engine lathes, drills, planer, shaper, milling machine, grinding machine, grindstones, emery wheels, etc., and the necessary hand tools. All this machinery has been admirably placed with reference to the greatest economy of space and power and has greatly increased the facilities for shop work. Such equipment has been provided at a cost of about $10,000.

Some additional machinery is needed to make the equipment complete in every respect, and the foundry room will have to remain unfurnished for the present.

ORTON HALL.

Since the last report this building has been fully equipped, and the geological collections and the library have there found a secure and convenient abiding place.

The cases in the old geological museum were all utilized and new cases at a cost of about $1,500 were provided.

The furniture for the library room is all new and modern, and cost in place about $2,000.

STATE ARCHÆOLOGICAL COLLECTIONS.

The collections of the state archæological and historical society have been placed in the geological museum under an arrangement entered into by the officers of that society and the trustees of the university, which it is hoped will prove of mutual benefit.

THE MOOREHEAD COLLECTIONS.

Under an arrangement made with Mr. Warren K. Moorehead, his very valuable archæological collection which has been on exhibition at the Smithsonian Institution at Washington, has been placed in the museum at Orton Hall and Mr. Moorehead has been made curator of it. Under the arrangement, Mr. Moorehead continues his work in the field. He has already added many valuable specimens to the collection, and has secured the gift of several private collections ranging in value from $40 to $3,000. Additional cases for his use have been provided at the cost of about $250.

ROADS AND GROUNDS.

During the past year the sum of $3,592.19 has been expended in caring for and improving the roads and grounds. A limestone road has been constructed from the north driveway to the main building passing in front of Hayes hall and the chemical laboratory building, at a cost of about $1,300, and the grading about those buildings has been completed in accordance with the plans prepared by Mr. H. Haerlien. The grading has been completed southward towards Orton hall far enough to indicate the excellence and beauty of Mr. Haerlein's plans. A walk of Hayden sidewalk brick has been constructed from the chemical laboratory southeastwardly towards the Neil avenue entrance, and another of Zanesville fire brick has been laid between Hayes and Orton halls. Other walks are needed, and it would add to the attractiveness of the campus if the grading could be continued, new roads built and a handsome gateway

provided for the High street entrance. These improvements, however, must be deferred for the present—the demand for additional instructors, additional apparatus for the various departments and for books for the library being so great as to absorb the funds. About all that can be done next year is to keep the campus in order and pave a few needed walks between the buildings.

DEPARTMENT OF CERAMICS.

The legislature at its recent session passed an act requiring the establishment at the university of a department of ceramics, "equipped and designed for the technical education of clay, cement and glass workers in all the branches of the art which exists in this state, or which can be profitably introduced and maintained in the state from the mineral resources thereof."

The act also requires the trustees to provide "an efficient laboratory designed especially for the instruction of clay workers"—which "shall be equipped with apparatus for chemical analysis, with furnaces and kilns for pyrometric and practical trials, with such machinery for the grinding, washing and preparation of clays for manufacture as is consistent with the character of the department."

The act also requires the trustees "to employ to conduct this department of ceramics a competent expert, who shall unite the necessary education and scientific acquirements a thorough practical knowledge of clayworking."

Appropriations of $5,000 for the year 1894–5, and of $2,500 for the year 1895–6 were made for carrying into effect the above provisions. In accordance with the foregoing requirements, a department of ceramics has been established and located at Orton hall. An expert possessing the qualifications prescribed in the act, was found in the person of Edward Orton, Jr., a graduate of the university of the class of 1884, and he has been duly elected director of the department. He has entered upon his work with enthusiasm, and has already secured by gifts much of the machinery necessary to equip the department. A small building has been erected for the kilns and work is progressing on the laboratory desks and outfits. The creation of this department, the first of the kind in this country, has awakened unusual interest among the clayworkers of the state who are giving the project their cordial approval and support.

DAIRY SCHOOL.

The value of special instruction in the arts of butter and cheese making, and the good results following the institution of schools for such instruction at Cornell university, the universities of Wisconsin and Minnesota and other land grant colleges in states where the dairy interests are less extensive and important than in Ohio, have led to a move-

ment for the establishment of such a school at the state university. At the last annual meeting of the state board of agriculture, a resolution was passed requesting the trustees to establish a school of this character at the university; and at a recent session of the legislature the committee on agriculture of the House of Representatives reported a bill providing for a dairy school at the Ohio state university, and making an appropriation of $40,000 for a building and the necessary equipm The bill passed the house shorn of the appropriation and was left to the senate. The trustees, realizing the importance of the dairy inte in the state, notwithstanding the failure of an appropriation, have ta steps to establish such a school and have set apart the sum of $2,500 beginning the work on a small scale in a basement room of the chemi laboratory building.

They hope to secure the services of a competent instructor and open the school for the reception of students at the opening of the next term.

Adequate provision for such a school, however, cannot be made until the legislature makes appropriations for a proper building for its accommodation.

THE SCHOOL OF LAW.

When the school of law was established in 1891, the tuition fees of its students were its only support. It was expected that in a short time it would be self-supporting, as such schools have been in other state universities. Until the last academic year it had no other income than the fees above named. Members of the bar of the state voluntarily became members of its faculty and generously gave their time and talents to the work of instruction, without other remuneration than the small income above mentioned afforded.

The legislature, however, on the 24th day of April, 1893, on its own motion, passed an act authorizing the board of trustees "to appropriate, annually, for the period of ten years, to the support and maintenance of the school of law of the Ohio state university, out of the fund derived under section 3951 of the Revised Statutes of Ohio, amended March 20, 1891, a sum not exceeding $5,000, in addition to the sum derived from the tuition fees of the students in said school of law."

The trustees, regarding such action of the legislature as a direction so to do, for the year ending June 30, 1894, appropriated out of the funds mentioned in said act, the sum of $1,500, which added to the tuition fees of the students made the income of said school for the year named $5,236, all of which has been applied to its support and maintenance. Its progress is detailed in the report of President Scott. The donation of the Noble law library, the generous support it is receiving from members of the bar and others, and the excellence of its instruction give promise of enduring success. Its removal from the court-house to the university brings the students into closer relations with those of other departments, to the mutual advantage of all concerned.

DEGREES.

At the commencement in June, 1894, on the recommendations of the faculty, the following degrees were conferred:

BACHELOR OF ARTS.

Henry Ward Backhus, New Bremen; Edith Daisy Cockins, Columbus; David n Davidson, Xenia; Charles Harker Farber, Mansfield; Harry Marshall Finley, Valley; Charles William Foulk, Warren; Mary Louise Hull, Columbus; Ora Lemert, Napoleon; Wyatt Garfield Plantz, Pomeroy; Kenneth F. Postle, isburg; Maud Virginia Smith, Columbus; Herbert Oswald Williams, umbus.

BACHELOR OF PHILOSOPHY.

Mary Edith Bell, Columbus; Isaac M. Voorhees, Unionport; Clara Byers, olumbus; George Sidney Marshall, Corning; Walter James Sears, Chillicothe.

BACHELOR OF SCIENCE.

William Hawks Coney, Honolulu; Edward Francis, Shandon; Virgil Guittard, New Bedford; Thomas Kenyon Lewis, West Lafayette; James Howard McGregor, Bellaire; Henry Thew Stevenson, Cincinnati; Marion Whitacre, Marion.

CIVIL ENGINEER.

Edward Walter Cunningham, Urbana; Willis H. Jenkins, Beloit; William Johnson McAllen, Fannettsburg; Mortimer Adam Munn, Bowling Green; Herman R. Postle, Harrisburg; Coles Abel Raymond, Wauseon; Christopher Ellis Sherman, Columbus.

ENGINEER OF MINES.

Patrick Henry Carroll, Houtzdale; Charles William Davis, Youngstown; Smiley Jones, Columbus; Arthur George Menough, Wellsville.

MECHANICAL ENGINEER.

David Arrel Pence, Lowellville.

MECHANICAL ENGINEER (IN ELECTRICAL ENGINEERING).

Frank McMillen Foster, Omega; Edward Frederick Gehrkins, Kelley's Isle Samuel Thompson Kerr, Martin's Ferry; Rush Emmett Manley, Presho; Francis Hoyt McGuffey, Groveport; Allen Sexton Pearl, Berlin Heights; Emmett Willet Stull, Elkland; William Nicholas Zurfluh, Toledo.

BACHELOR OF SCIENCE (IN HORTICULTURE AND FORESTRY).

William Benwick Beattie, Zanesville; Ernst Everett Bogue, Orwell; Sherman Hood, Meander.

GRADUATE IN PHARMACY.

Anna Gertrude Bagley, Columbus; Orsylla Ann Groff, Orrville; Thomas Carlisle Haney, Sippo.

MASTER OF SCIENCE.

Karl Dale Swartzel, Lewisburg; Charles Lincoln Arnold, Milan.

DOCTOR OF PHILOSOPHY.

Lucy Adelaide Booth, Columbus.

On the recommendation of the faculty of the school of law the following degrees were conferred:

BACHELOR OF LAWS.

James Marion Butler, Carmel; Alfred Cahen, Allegheny, Pa., William Hunt Carroll, Wilmington; John Ludwick Davies, Columbus; Harmon Scott Fairchild, Springfield; James Robert Fitzgibbon, Newark; Frank Laverne Harris, Payne; Edward Davenport Howard, Columbus; Edward Bancroft McCarter, Columbus; Charles Wesley Meck, Toledo; Daniel Francis Mooney, St. M. ry's; Burt Fisk Voorhees, Coshocton; Grant Alexander Warren, Columbus; Harry Bright Weaver, Nebraska.

MASTER OF LAWS.

William Herbert Page, Columbus; Sherman Tecumseh Wiggins, Columbus.

The following persons who had not the previous preparation to entitle them to a degree, were granted certificates that they had taken and passed successfully the studies in the school of law:

Charles Almond Field, Columbus; Timmons Harmount, Kingston; James Averill Jeffers, Beallsville; Frank William Ketterer, Woodsfield; Charles Edwin Schumacher, Woodsfield.

THE FACULTY.

The changes in the faculty since the last report are detailed in the report of the president. The number of professors in the academic faculty is 25, associate professors 1, assistant professors 6, lecturers 1, curators 1, librarian 1, assistants 21.

The law faculty consists of the dean, secretary and nine professors, their position and compensation and that of other employees of the university are stated elsewhere in this report.

STUDENTS.

The number of students in attendance during the academic year just closed was 800. The number of students in the several departments and classes, and the course of instruction pursued in each are shown in the president's report and the catalogue which is made a part of this report.

THE PRESIDENCY.

In the last report the trustees reported the resignation of president Scott and recommended that the law restricting the salary to $3,000.00 be amended so as to remove such restriction. The legislature has removed the restriction, leaving the trustees free to secure the best talent for this most important position. Efforts in the direction of securing a president have so far been unsuccessful, but an arrangement has been made whereby president Scott continues to discharge the duties of the position until his successor can be secured.

The following are estimates for the year ending June 30, 1895:

ESTIMATES.

Salaries	$92,000 00
Expenses of trustees	600 00
Fuel and light	5,000 00
Repairs	4,400 00
Library	4,000 00
Printing and advertising	3,000 00
Roads and grounds	1,500 00
School of law (over receipts)	1,500 00
Virginia military lands	500 00
Interest on bonds	6,600 00
Bonds due June 1, 1895	10,000 00
Laboratory supplies and apparatus	9,000 00
Equipment of dairy school	2,500 00
Department of ceramics	5,000 00
Overdrawn account, treasurer	5,051 56
Miscellaneous expenses	5,000 00
	$155,651 56

The estimated income is adequate to meet these estimates.

CONCLUSION.

The progress of the university for the past year is set forth in the president's report, and therein are also noted such investigations and experiments as have been made. Attention is respectfully called to the recommendations contained in said report.

The means at the disposal of the trustees will not admit of any further expansion of the university in the direction of additional departments. The aim will be, following the suggestion of the president, to build upward and not outward.

It is apparent to any one who is familiar with condition of the university that its entire income will be barely adequate to meet its current expenses, provide for the interest on the bonded indebtedness and for payment of the bonds as they fall due.

Additional buildings are needed, among them an armory and gymnasium, a larger hall for public assemblages, commencement exercises and the like, an engineering building, a dairy building, a biological building and an astronomical observatory.

All these should be provided if the university is to keep pace with the progress of similar institutions in other states.

Respectfully submitted,

ALEXIS COPE, *Secretary.*

Acknowledgments.

The thanks of the university are due for gifts received during the year, as follows:

I. For gifts to the department of agriculture:

1. To Major Henry E. Alvord, director of the exhibit of the agricultural colleges and experiment stations, for samples of agricultural soil from Illinois, Massachusetts, Minnesota, Mississippi, New Mexico and Tennessee; seventy-four boxes.

2. To M. L. Nassilliere, French special commissioner of agriculture, for diagrams, photographs and tables.

II. For gifts to the department of geology:

To Supt. J. C. Conway, Miamisburg, O., for the bones of a mastodon found on his father's farm near Catawba Station, Clark county, O.

III. For gifts to the archæological museum:

1. To the heirs of Mr. Marshall Anderson, Circleville, O., for a collection of 6000 specimens.

2. To Mr. J W. Cavan, Elmville, O., for partial donation of a collection valued at $100.

3. To Mr. Warren Cowen, Elmville, O., for partial donation valued at $75.00, of 30 specimens.

4. To Mr. Leonidas Simonton, Lebanon, O., for partial donation valued at $40.00.

5. To Mr. Charles Lewis, Circleville, O., for assistance in exploring mounds.

IV. For gifts to the department of mechanical engineering:

1. Keasbey & Mattison Co., N. Y., magnesia sectional covering.
2. Hill Friction Clutch Co., Cleveland, O., clutch for 2¼-inch shaft.
3. Westinghouse Air Brake Co., triple valve and brake apparatus for car.
4. Pleukharp Mfg. Co., six patent barrels.
5. Penberthy injector.
6. Penberthy injector in section.
7. Metropolitan automatic injector, No. 5.
8. Sherwood Mfg. Co., Buffalo, automatic injector.
9. Handcock injector.
10. Blake condenser air pump, 4 x 6 x 4.
11. Wm. Sellers & Co., injector 1887, self-acting No. 6½, in section.
12. Curtis steam trap No. 00.
13. G. J. Roberts Co., gem water motor, No. 2.
14. Laidlaw, Dunn, Gordon Co., duplex pump, 6 x 4 x 6.
15. M. T. Davidson, Brooklyn, N. Y., pump, 6 x 4 x 6, size No. 3, R. P.

16. Blakeslee Steam Pump Co., Duquoin, Ill., pump No. 1½ A.

17. Blakeslee Steam Pump Co., jet pump.

18. James Leffel & Co., ten-inch turbine water wheel in case ready for attachment to stand pipe for actual testing.

19. J. H. McEwen Mfg. Co., tandem compound steam engine, 8 x 13 x 12 inches, 80 H. P.; including the peculiar governor possessing the quality of remarkably close regulation.

For partial gifts to the same department:

1. To the manufacturers, for two Calkins indicators.
2. To the manufacturers for one Batchelder indicator.
3. New Pulsometer Co., N. Y., pulsometer No. 3.
4. Rife's Hydraulic Engine Co., hydraulic engine No. 20.
5. Pelton Water Wheel Co., water wheel No. 3.
6. Baldwinsville centrifugal pump works, pump No. 6.
7. Rider Engine Co., Rider hot air engine, 5-in. cylinder.
8. Do., Ericsson hot air engine, 6-in. cylinder.
9. Wheeler Engineering Co., fifty H. P. condenser.
10. Link Belt Engineering Co., rope transmission 30-inch pulleys.

Besides these additions to the machinery, many interesting and valuable photographs suitably framed, were presented by various manufacturing companies.

V. For gifts to the department of mining and metallurgy:

1. To Buffalo Forge Co., for a centrifugal fan and engine to run it
2. To B. F. Sturtevant & Co., for a centrifugal fan.
3. To Jas. G. Pulling & Co, for a sectional pump loaned.
4. To Edgar Thomson Steel Works, Pittsburgh, for a set of ores and products.
5. To Mr. H. R. Hall, Supt. Carbon Iron & Steel Co., Parryville, Pa., for a set of ores and other samples.
6. To Mr. Jessie L. Jones, for ores and products illustrating open hearth steel manufacturing.
7. To Mr. Edward Orton, Jr., for ores and products illustrating basic steel manufacturing.
8. To Messrs. H. S. Mennough, E. Evans, W. L. Evans and others for samples of iron ores, fuels and refractory materials.
9. To Mr. Julian Kennedy and others, through the kindness of Mr. C. W. Davis, for drawings of furnaces and machinery.

VI. For gifts to the department of physics and electrical engineering:

1. To the General Electric Co., for five street railway motors.
2. To the Fort Wayne Electric Co., for Wood arc light dynamo of 15 lights capacity, with 15 lamps.
3. To the same company for the loan of a Wood alternating current dynamo, of 750 lights capacity, with switch board and instruments complete.

4. To the Standard Electric Co., for a 20-light dynamo with ten lamps.

VII. For the library:

1. To Hon. A. G. Thurman for more than 1,000 volumes of United States Government Reports and 500 pamphlets.

2. To the United States Coast and Geodetic Survey for 260 charts.

3. To many Stock Breeders' Associations for sets of their registers.

4. To several Civil Engineering Societies and State Mining Bureaus for valuable documents.

Report of the President.

To the President of the Board of Trustees:

DEAR SIR: I have the honor to present my report for the year ending June 30, 1894.

At the close of the year 1892–93, Rev. A. C. Barrows, A. M., D. D., professor of English Literature and History in the Iowa State Agricultural College, was elected to the chair of English Literature in the place of Rev. James Chalmers, Ph. D., LL. D., resigned; but by a special arrangement Professor Chalmers remained in the position for one year, and the coming of Dr. Barrows was postponed till the opening of the University in September next.

At the end of the year 1893–94, Mr. W. S. Elden, assistant in Latin and French, severed his connection with the University after two years' of faithful and acceptable service. His place has been supplied by the election of Mr. C. R. Watson, a recent graduate of the College of New Jersey.

During the year, T. J. Keating, Esq., professor of the Law of Evidence in the School of Law, finding that the demands of his practice seriously interfered with his duties as a member of the faculty, tendered his resignation. The University is under obligation to Mr. Keating for valuable services rendered for the sake of helping to establish and maintain this department while the University was able to pay but an inadequate compensation. The subject of Evidence was taught to the close of the year by the Dean.

In the spring term a special class in civil government was organized in the preparatory school to accommodate the incoming class in agriculture, and Mr. George Rightmire, a teacher of successful experience, was placed in charge of it.

The number of students in attendance during the academic year was seven hundred and seventy-eight. The number for what may be called the catalogue year was about eight hundred. The distribution of the former number among the annual classes is shown in Appendix I, table I. Their distribution among the courses leading to degrees is shown in the same Appendix, tables II and III. Their distribution among the departments and the subjects of study is shown in Appendix II.

It is a noticeable and gratifying fact that the preparatory department had but ninety-nine students. Eleven years ago the number of prepara-

tory students was sixty per cent. of the whole number. The next year it was forty-nine per cent. In the year 1886–87 it had fallen to forty-two per cent. In 1891–92 it was about twenty-eight per cent. In 1892–93 it was twenty-five per cent. This year it was less than thirteen per cent.

The number of degrees conferred at the last commencement was seventy: Bachelor of arts, twelve; bachelor of philosophy in the English course, three; bachelor of philosophy in the Latin course, two; bachelor of science in the general course, seven; bachelor of science in horticulture and forestry, three; civil engineer, seven; engineer of mines, four; mechanical engineer, one; mechanical engineer in electrical engineering, eight; graduate in pharmacy, three; bachelor of laws, fifteen; master of science, two; master of laws, two; doctor of philosophy, one. The names of the candidates are announced in their proper place in the catalogue. Certificates were granted to five students who completed the course in the School of Law but were not eligible to degrees. Certificates were given also to two students who completed the Two-Year Course in Mining.

There has been frequent demand for a line of instruction leading to the study of medicine. It is desirable, indeed, that all who are to study medicine should receive preliminary training at least as broad as that to be derived from one of the general courses of the University. But as long as medical colleges admit students with no better preparation than that offered by the common school, a great proportion of the candidates will not give the time and labor necessary to earn a college degree. Nevertheless, there are those who aspire to something more than a bare admission to practice, and are not content to meet the minimum requirement. They appreciate in some degree the grave responsibilities of the profession and the necessity of a large intelligence for the proper discharge of them. To meet the wants of this class and to encourage others to seek a more thorough education than they would otherwise do, it has seemed to the faculty advisable to open a course preparatory to the study of medicine, which, on the one hand, would require less time than is necessary to secure an academic degree, and, on the other, would carry the student much beyond the lower limit at which a great number now enter the medical college. Such a course has therefore been adopted to take effect at the opening of the coming year. The greater part of it consists of studies in science, and most of these are such as require laboratory practice. To them are added English and German or French, Latin, political economy and psychology. The second year's work in German or French is to be scientific reading, and the Latin will be taught with special reference to medical nomenclature. The importance of political economy to every citizen and of psychology to every physician need hardly be suggested.

Another step has been taken toward liberalizing the general courses of study. Instead of prescribing the elective studies among which the student must make his choice, the courses now permit him to elect any study that is taught in the collegiate department of the University, provided only that he is qualified to pursue it with profit.

In the following survey of the work of the year I have made a rough grouping of the departments, placing first the departments of language and literature; next those of history and political science, and philosophy; then mathematics; then the physical and biological sciences; followed by those which involve the application of mathematics and physical science; after them those included especially in the school of agriculture; then veterinary medicine; pharmacy; military science and tactics; closing with the school of law.

The rapid growth of the work in English is creditable to the University. We but share, however, in the general revival of the study of our own language which has taken place throughout the country. City boards of education and college boards of trustees, high school teachers and college faculties, pupils and students, have felt the impulse, and English, both as language and as literature, has been allotted a much larger place than formerly in the courses of study.

In the department of rhetoric the number of courses has been increased and the methods of instruction have been made even more thorough and practical. The theory of the subject is carefully taught, but a main part of the work consists in intelligent and continued practice. Great pains are taken to make the students skillful and effective in the actual use of their mother tongue.

The amount of labor involved in this method is very great. It appears from the report of the head of the department that, in addition to eighteen class hours a week and a large number of minor exercises, there were presented nearly five thousand distinct essays and reports. Supposing these to average no more than three pages each, they contained an aggregate of some fifteen thousand pages. To examine and criticise this amount of writing would require the examiner to average eighty pages each working day of the entire college year. This alone is work enough for one person. When it is stated that the professor of rhetoric is also secretary of the faculty and editor of the catalogue, and that he has given special attention to the improvement of the Lantern, it is plain that he carries an unreasonable burden. Under such conditions it is impossible that he should do justice to his department work. The appointment of a competent manuscript reader to assist in the examination of the productions of students would not only afford needed relief to him, but would add greatly to the efficiency of the instruction

The number of students in the classes of this department the first term was three hundred and forty; the second term three hundred and thirty-one; and the third term three hundred and two. The year before

the numbers were four hundred and thirty-four, three hundred and twenty-eight, and three hundred and seven. The number for the first term, however, included a first preparatory class containing seventy-four students. This class having been cut off with the others of that year, the enrollment of the department for the corresponding term of the next year is diminished.

A healthy increase has occurred in the department of English Literature. The whole number of students was, indeed, less than in the previous year, but this is owing to the fact that the largest class, which was preparatory, has been discontinued and another has been transferred to the department of rhetoric as belonging rather to language than to literature. The remaining classes numbered, last year, ninety-one the first term, and eighty-eight the second and third terms, while this year they numbered one hundred and eighty-eight the first term, one hundred and twelve the second term, and one hundred and three the third term. Of the one hundred and eighty-seven the first term, sixty-six were teachers in the public schools who took English literature alone and continued in the University but a single term. Omitting these, the attendance was one hundred and twenty-one. In the elective classes the attendance last year was forty-six, and this year, omitting the teachers, fifty-nine.

The classes of this department have met during the year in Orton Hall, a much more convenient arrangement in several respects than the former one. We have reason to expect that in the transfer of the department to new hands in accordance with the action of your honorable body, it will lose neither efficiency nor popularity.

Some who urge the development of the teaching of English have thought that their advocacy of English committed them to an opposition to the teaching of Greek; as if greater attention to the modern and native language implied a neglect of the ancient and foreign one. When the colleges provided but little study of English beyond the rudiments, there was some reason in the claim that it was unjustifiable to spend so little time on one's own tongue while so much was spent on that of a people who ceased to hold an important place among nations two thousand years ago. If but one could be studied, English ought certainly, in an English-speaking country, to be that one. But why not both?

The number of students who choose the only course offered by the University which includes Greek, bears a very respectable ratio to the whole number and to the numbers in other departments. There is no other in which so large a proportion of students remain to the end and receive a degree. For example, at the last commencement twelve candidates received the degree of bachelor of arts. In the junior year this class numbered twelve; in the sophomore year twelve; and in the freshman year twenty-one. Moreover, the number seeking this course keeps

increasing. In 1886 the number that entered it was eleven, and the next year ten. In 1892 the number entering was twenty-two; and in 1893, twenty-four. The whole number in classes in Greek last year was eighty-one, eleven of whom formed the class in ancient art, a subject that is offered in alternate years.

The department of Latin has had the full service of Professor Derby, renewed in body and mind by a year of absence and special study, and the partial services of two assistants. The regular classes contained almost the same number as in the previous year. The class in pharmaceutical Latin numbered nineteen the first term, fifteen the second term, and thirteen the third term; whereas in 1892–93 it contained ten the first term and eight the second term. There was no class the third term of 1891–93; but the course in pharmacy was afterwards so changed as to require the subject for two hours a week the third term, and in the new course preparatory to the study of medicine, already mentioned, it is required five hours a week during the third term. The object of this instruction is to make the student who pursues these courses familiar with the forms and use of pharmaceutical and medical terms derived from the Latin.

It is proposed to extend the work in Latin by the addition of one hour a week through the year in prose composition and of one hour a week in private antiquities, in which the customs of the Roman people in food, dress, social intercourse, occupation, amusements, and so on, shall be studied.

In the department of Romance languages, the number of students has risen in the last five years from one hundred and two to two hundred and two. This year the increase was twenty-three.

The number beginning French was somewhat less than in the preceding year, having fallen from one hundred and thirty to one hundred and eighteen. The second-year classes, however, showed an increase, one having twenty-three students to seventeen the year before, and the other forty-one to eighteen the year before. Seven took advanced French to six the year before. Thirteen elected Spanish to eight who took Italian the year before and to six who took Spanish two years ago. The plan and methods of work were substantially the same as the year before.

The first preparatory class in German having been dropped, a considerable number of candidates presented themselves who were unprepared to enter the German of the second year. In such cases, if the candidates would otherwise have been admitted, the German was provided for by allowing the students to enter the freshman class in that subject. The total number of students taking German was one hundred and thirty-four, as against one hundred and forty-two in the year 1892–93, a loss of eight, but the first preparatory class of the year before numbered twenty-eight. Another reason for the disparity was the omis-

sion of the most advanced course on account of there being no students electing it who were prepared to do the work.

No department of the University has shown a stronger or more continuous increase in number than that of history and political science. The total enrollment for five years, in the classes now belonging to the department have been ninety-seven, one hundred and ten, one hundred and fifty-seven, one hundred and seventy-six, and two hundred and seventy. The increase last year was almost equal to the entire enrollment of 1889–90. The classes in the political history of the United States, containing eighty-three students, and in political economy, containing seventy students, were so large as to require a division into two sections each. Unless the growth of the department should be checked an additional teacher will soon be needed, even if there should be no extension of the range of subjects.

We cannot make this department too strong. Nothing more befits a university of the state and nothing is more incumbent on it, than to teach sound knowledge and sound opinions in history, economics and politics, and to educate its students in sound methods of thought on economic and political subjects.

The instruction in philosophy has been given mainly by Assistant Professor Coler. I taught a class in logic and psychology composed of freshmen in the English philosophy course and a senior class in an elective subject, each two hours a week. The total enrollment of the department was one hundred and twenty-five the first term, one hundred and seventeen the second term, and one hundred and eleven the third term. The preceding year it was seventy-five the first term, seventy-two the second term, and seventy-one the third term. The difference in numbers is more than covered by two new classes, but it is probable that there would have been no decline in the enrollment, even without the new classes, since several students who entered them would have joined the other classes if the new ones had not been formed.

The department can not cover the whole field that belongs to it without a larger teaching force. I hope that it will not be long until we can secure the services of an assistant who has had the advantage of special training at home and abroad.

The department of mathematics is overcrowded, notwithstanding the discontinuance of preparatory algebra. The number of students in the department the first term was three hundred and eighty against four hundred and twelve, or, omitting the class in preparatory algebra, three hundred and twenty-nine, in the corresponding term of the previous year. These three hundred and eighty students were divided into twenty classes and sections and required eighty-three hours a week in teaching. Two of the assistants had twenty hours each, one assistant had twenty-one hours, and the head of the department had twenty-two hours. Justice to the teaching force of the department, if not to the

students, requires that additional help should be provided for at an early day.

You will be gratified to note the development of the study of advanced mathematics among us. The professor of mathematics says in his report, "During the year I have had classes in differential equations, higher calculus, modern geometry, and the theory of functions. Two students have taken the master's degree in science, making mathematics their major study. Not more than three American universities have had a larger number of students studying higher mathematics than we have had this year."

The classes in the department of physics showed but slight variations in numbers from those of the year before. The money allowed by the trustees for an extra assistant proved sufficient to secure for the second and third terms the services of Mr. N. H. Brown, who had acted very acceptably as student assistant during his senior year; and it is expected that the larger sum now allowed will retain him another year.

The elementary class in general chemistry has been somewhat diminished for three years past, owing to changes in the courses of study. By the first of these changes all of the freshmen in engineering courses were transferred to the department of agricultural chemistry, and by the second the freshmen in the course in arts and philosophy were given an election between chemistry and mathematics. Nevertheless the class is still a large one, and it is improved in quality by the fact that nearly all of those who enter it do so from choice.

A much larger proportion of this class continues work in chemistry into the second and third years, and some are even taking the fourth year's work. In the class of the second year the number ran up last year from eleven to thirty; and in the class of the third year from five to ten. The latter class will be still larger next year, fifteen students having already applied for desks. The laboratory work is not only taken by greater numbers, but it is done with greater care and interest.

The very capable and zealous services of Assistant Professor McPherson are of high value to the department.

Astronomy, though not yet separated from the department of pure mathematics, is naturally associated with the mathematical and physical sciences. It is a matter of regret that the University is so meagerly supplied with facilities for teaching this interesting and important subject. A small observatory for instruction, which would cost but a few thousand dollars, would be of great advantage to the University, both directly and indirectly. Persons of means could find here an opportunity for rendering a valuable service to the institution and to the public.

In the department of geology the year has brought a notable advance. As Dr. Orton says in his report: "The year has been an important one in several respects for the department, the chief features being (1) the occupation of Orton Hall and the consequent distribution and rearrange-

ment of the collections, with greatly increased facilities for their proper display; (2) the employment of a well trained assistant in connection with the introduction of a division of geological science not provided for in our course hitherto, viz., petrography; and (3) the addition of a department of Ohio Archæology with its collections and the permanent storage of the same in the gallery of the museum."

The introduction and distribution of the materials belonging to the various collections make the admirable design of the building fully apparent. A new and improved arrangement has been adopted, by which a better display has been secured for the materials as an exhibit, and they are at the same time rendered more useful as a means of education.

The provision for instruction in petrography places the department in a more advanced and therefore more satisfactory position. Without it we should not by keeping pace with the progress in geological science, but with it and the capable and thorough instruction which is now offered in it, we may feel assured that the University will suffer no discredit at this point.

According to an agreement entered into by the committee appointed for the purpose by the board, on the one part, and Mr. W. K. Moorehead on the other, the valuable archæological collection of Mr. Moorehead has been transferred from the Smithsonian Institution at Washington to Orton Hall, and Mr. Moorehead has been made curator of it. Since his appointment he has been untiring in his efforts to promote the growth of the collection. He has already secured the gift of several minor collections ranging in value from forty dollars to three thousand dollars or more.

The University has also become the repository of the collection in archæology belonging to the Ohio Archæological and Historical Society, which contains many valuable specimens, including the entire exhibit in archæology made by the society at the World's Columbian Exhibition. It is estimated that the money value of the archæological material now in Orton Hall is hardly less than $20,000.

The University is indebted to Mr. Moorehead for his agency in obtaining for the geological museum a considerable part of the skeleton of a mastodon. Through the courtesy of other institutions which received a few of the more important bones, these will be added to the principal collection, making, it is supposed, the most complete skeleton of the kind ever discovered in Ohio.

The enrollment of the department was about the same as last year, except that the class in physical geography was smaller than formerly. The reason for the falling off in this class is that since the standard of admission has been raised a large proportion of the candidates have studied physical geography before they came to the university.

In an institution like ours, botany should hold a leading place. Of the "sciences relating to agriculture" none can claim precedence

over it. The board has frequently recognized its claims. In 1881 they established the department of botany and horticulture, and in 1891 they divided it, giving to botany the entire services of a professor and an assistant. In 1883 a separate building was erected for the department as it was then organized, and since the division the building has been assigned exclusively to the professor of botany. The impression has seemed to prevail, however, that but slight equipment is necessary for instruction in this subject, and the requests of the present head of the department for liberal appropriations have met with a rather discouraging response. It is true that something is done every year to increase the stock of apparatus, and the herbarium and the museum are receiving frequent additions. But the growth is slow and very much that a well equipped botanical department must have has not been provided.

The present request for a propagating house is one that should be granted as soon as funds can be spared and it is desirable that the beginning of a botanic garden should be made without longer delay. The suggestion that the campus may be made an arboretum has been made before and appears to be entirely feasible.

The exhibit made at the World's Columbian Exposition, under the direction of the head of this department, was especially creditable. It was prepared with great pains and skill, and its return to the university has made a handsome and useful addition to the botanical museum.

The total attendance in the department was almost the same as in the year 1892–93; but a larger proportion of it was in the collegiate classes, the preparatory class having shrunk from eighty to fifty-eight. The explanation is the same as in the case of physical geography, more of the candidates study elementary botany before they enter the University.

The work in the department of zoology and entomology consisted in 1891–92 of but three courses of instruction, and of these but one was required, and that for only three hours a week in one year of a single course of study. But it has been gradually extended and incorporated, until there are now seven courses, four of which are required, and part of the required work appears in four different courses of study. The collections and the appliances continue to grow, though their growth is much slower than the interests of the department demand.

The department is greatly straitened in its present rooms and more ample accommodations should be provided as soon as practicable.

The number of students in the department of anatomy and physiology last year was sixty-six each term, this year by terms, eighty, ninety, ninety-three, showing a good increase. This increase, like the one in zoology and entomology, causes an inconvenient crowding of the work. It is hoped that some way of relief may be found within a short time.

The number of students in the department of civil engineering during the first term was sixty-two; the second term sixty-eight; and the third term sixty-four. Seven students graduated in the course of study. There is need of an additional outfit of surveying instruments.

The classes in the department of mining and metallurgy show about the same numbers as in the previous year. Four students took the degree of engineer of mines at the last commencement. The number who took the short course in mining is somewhat disappointing. For a time this course drew a goodly number from Pennsylvania, but during the last year but five have been in attendance from that state. Perhaps the disturbed condition of the mining industries has hindered some and discouraged others. It is not surprising if the more intelligent and ambitious young miners have been deterred from expending money and time to prepare themselves for higher employment in a field whose future is so uncertain. Perhaps also some of those who have retained their desire for such a preparation have been attracted by the new lines of instruction now offered by the State College of their own state. The strikes have probably operated in Ohio also to keep back those whose desires would otherwise lead them to secure an education for their special work and thereby improve their prospects in life. It is worth while to consider whether new and more energetic efforts ought not to be made to awaken the interest of young miners of the state and acquaint them with the opportunities which are here offered to them.

An important step was taken when the mechanical laboratory was converted from a laboratory for elementary work into one for testing and experiment. The elementary work is now done with greatly improved and extended facilities, and at the same time its removal to Hayes Hall has opened the opportunity to introduce in its former place the machinery and apparatus necessary for advanced work. The location of the new engine and dynamo in this building has made them available to the department for instruction. The money set apart by the board for the inauguration of the new movement was necessarily small for such a purpose, but it has been supplemented by the generosity of many manufacturing establishments which either made gifts to the department or allowed liberal discounts on purchases.

The need of more room is becoming very evident. It will be impossible to enlarge the means of illustration and experiment to what they should be and provide for all the lines of work that such a department should carry on, until a new and larger building has been erected or a commodious addition has been made to the present one.

In the year 1892-93 the number of students in the department, omitting the elementary class since transferred to Hayes Hall, was, by terms, seventy-four, seventy-five, sixty-seven. In 1893-94 it was ninety-three, ninety-six, seventy-seven.

The extension of the electrical plant of the University during the year has not only improved the means of lighting and ventilation, but has materially enhanced the facilities for instruction in electrical engineering. The installation of the addition placed an extra burden on Assistant Professor Caldwell and interfered considerably with his regular work, which was a special disadvantage to him and his work, as he had just entered on his first year at the University. It will be no slight compensation for this disadvantage, however, that hereafter the extended plant will be capable of so much service to the department.

Several gifts and loans to the department constitute a substantial increase of its equipment.

The University was honored by the appointment of the professor of physics and electrical engineering as a member of the committee of awards in the department of electricity at the World's Columbian Exposition. He was made chairman of the sub-committee on electric lighting, and conducted a test of incandescent lamps. His report will appear as a special document printed at Washington.

I have already mentioned the transfer of the elementary work of the mechanical laboratory to the department of industrial arts. It includes carpenter work, forge work and machine work, to which foundry work is to be added when the room designed for it has been equipped. The outfit of the shops was increased by ten thousand dollars' worth of new tools and machines; and electrical power was introduced to drive the shafting and to furnish blast and ventilation for the forge shop.

The courses in mechanical and electrical engineering were so modified as to admit of a considerable addition to the amount of shop work required in those courses.

The number of students working in the department was by terms, seventy-seven, one hundred and twenty-eight, and one hundred and nine. The previous year the number doing the same kind of work was fifty-four, forty-two and sixty-six. This great increase in numbers has already made it difficult to conduct the work satisfactorily.

The efficiency of the department is at once shown and increased by the manufacture by student labor of many drawing tables and tools, some of the latter being of the large kind.

In order to increase the number of hours of shop work in the courses in mechanical and electrical engineering, as above stated, the work in drawing in these courses was rearranged. The new course in industrial arts requires drawing throughout each of the two years that have been adopted and is announced as one of the subjects that will be included in the two remaining years. Drawing has also been introduced into the course in agriculture. As a consequence of these changes the number of teachers is insufficient for the number of students and the amount of work.

The number of students in freehand drawing was by terms, one hundred and ten, one hundred and six, and thirty-two. The year before it was one hundred and twenty-five, one hundred and six, and forty. Owing to the rearrangement of the classes already mentioned the comparison by terms of the numbers in the mechanical and technical drawing for the two years does not indicate the relative attendance or the relative amount of work done. I therefore give only the total enrollment for each year: in 1893-94 it was three hundred and thirteen; in 1892-93 it was three hundred and fifty.

The equipment of the department of agriculture has been increased by additional lantern slides showing noted domestic animals, farm machinery and buildings; by the model of a horse illustrating proper and improper modes of hitching for draft; by the mounting of the skeleton of a horse; by the return of the tile exhibit prepared for the World's Columbian Exposition by the head of the department; and by the donation of charts and specimens of soil from the exposition.

A course of twelve lectures was delivered before the students in agriculture by well-known agricultural men, and is pronounced by the professor of agriculture the most satisfactory that has been delivered. The lectures were as follows:

1. Some Experience in Horticulture—N. Ohmer, Dayton.
2. The Need of Special Training for the Dairyman—Ex-Gov. W. D. Hord, Fort Atkinson, Wis.
3. Among the Horses—F. A. Derthick, Mantua.
4. The Farm as an Educator—Dr. N. S. Townshend, Ohio State University.
5. Pleasure and Profit in Fruit Growing—Hon. A. T. McKelvey, St. Clairsville.
6. Mistakes to Avoid in Sheep Husbandry—S. H. Todd, Wakeman.
7. Some Principles in Feeding and Breeding Sheep—J. Fremont Hickman, Agricultural Experiment Station, Wooster.
8. Problems in Southern Ohio Agriculture—Alva Agee, Cheshire.
9. Animal Portraiture and Engraving—J. W. Hills, Delaware.
10. Taxation as it Affects Agriculture—Hon. W. N. Cowden, Quaker City.
11. The World's Columbian Dairy Test—Prof. M. A. Scovell, Lexington, Ky.
12. The World's Columbian Dairy Test, (continued)—Prof. M. A. Scovell, Lexington, Ky.

The class room of the department is much crowded. Additional accommodations would promote its work and should be provided without unnecessary delay.

Several lines of experiment have been conducted. Three of them have been experiments with wheat: 1. The comparative effect of stable

manure when plowed in and when spread on the surface; 2. The effect of hot water and of lime in the prevention of smut; 3. The comparative effect of plowed and unplowed corn stubble as a seed bed. Four kinds of experiments have been made with corn: 1. The effect of different cultivators and different depths of cultivation; 2. The effect of thinning; 3. The best time to cut for fodder; and 4. The desirability of planting horse-beans with corn for ensilage. A comparative test was made with five varieties of millet. Other experiments were made with hogs, cows and poultry.

Besides these courses of experimentation, four others have been continued for the Ohio Agricultural Experiment Station, which had undertaken them while it occupied the University farm, and desired to have them carried forward under the same conditions; one each with wheat, oats and corn, and one in rotation of crops.

The methods and results of several of these experiments are given in detail in Professor Hunt's clear and exhaustive report.

The largest number of students in the classes in agriculture in 1892–93 was seventeen. The largest number in 1893–94 was thirty-seven. In the school of agriculture, including the courses in agriculture and that in horticulture and forestry, the attendance has increased since 1890–91 from thirty to seventy-two.

The department of horticulture and forestry has made manifest progress. The largest enrollment of the preceding year was eighteen; this year it was twenty-nine. Since the exclusive use of the gardens and orchards have been given to the department and it has been furnished with a more complete equipment, the methods of teaching have become much more practical and therefore much more efficient. The equipment, however, is still scant, and it is hoped that it may be increased from year to year till it is fully adequate to the wants of the department.

In order to accommodate the large number of students in the department of agricultural chemistry desks were placed in the former store-room of the department, in the room designed for organic analysis, and in the preparation room. Even with this increase in the number of desks, it was still necessary to assign two students to each desk in the main laboratory.

Professor Weber and Assistant Professor McPherson were associated in an investigation to determine by the polariscope sucrose in the presence of dextrine or commercial glucose. They have embodied the results of their work in a paper which is to be read before the Association of Official Agricultural Chemists and published in the Journal of the American Chemical Society.

Mr. L. W. Bloomfield, the assistant in the department, has been engaged in an investigation of the effect of commercial fertilizers on the composition of the wheat plant.

There being no regular seniors in veterinary medicine the number of classes in this department was somewhat reduced. During the first term the head of the department and the assistant each taught eight hours a week and attended clinic six hours a week. The work of the former continued the same through the year. The assistant had ten hours in the winter term and eight hours in the spring term, besides the clinic. There were three students of the first year, four of the second, and two irregular, nine in all; but the instruction was given to a larger number, as some of the studies of the course are included also in the course in agriculture. The addition of agricultural students more than doubled the size of one or two of the classes. The attendance of third-year students next year will render additional classes necessary.

There were thirty-five students in the school of pharmacy, an increase of four over the previous year. Besides these, seven veterinary students and one science student had pharmacy as one of their studies. The indications are that there will be a still larger number next year. The new course leading to the study of medicine requires one year in pharmacy, which will in time still further increase the number. The question how to accommodate so many will soon become an important one.

Besides the teaching heretofore done in this department, the subject of materia medica was undertaken in the winter term by Mr. Dye, the assistant, and carried by him to the close of the year. His willing and efficient services are worthy of substantial acknowledgment.

The report of the professor of military science and tactics shows that the maximum number in the battalion at any one time during the year was three hundred and fifty-three and the minimum number two hundred and thirty-five. The maximum number the year before was three hundred and fifty-seven. The number of freshmen receiving theoretical instruction in tactics was one hundred and one; the year before it was eighty-two. The number of sophomores receiving instruction in the principles of the art of war was sixty-six; the year before it was fifty-four. The reduction of the total enrollment in the battalion was a result of discontinuing the first year of the preparatory school.

On account of the inclement weather the drill was omitted during the second term. Previously we had always been able to provide some place for indoor drill, though the accommodations were never good and grew more and more restricted. For a single season very suitable rooms in Hayes Hall were free for the use of the battalion; but they were soon occupied for the use for which they were designed. Under the present conditions, the best plan seems to be to require out-door drill during the fall and spring, and to give class-room instruction during the winter.

The school of law has reached the end of its second year, and is clearly stronger and more firmly established than it was a year ago. The

sum appropriated by the board toward its support has removed the uncertainty that attached to its future, and produced general confidence and contentment.

The removal of the school to the University buildings at the end of the year will bring it into closer alliance with the institution and will probably prove to be of advantage on both sides.

Recent legislation provides that law students shall read three years before being admitted to practice in Ohio. This has made easy a step which I wished to see taken at first—the adoption of a three-year course for the degree of bachelor of laws. This has already been done and the new course will go into effect at the beginning of the school year in September next.

The number of students in attendance increased from sixty-seven the year before to seventy-two, of whom thirty-five were in the junior class, thirty-four in the senior class, and three were post-graduates.

A noticeable and gratifying fact is the high standard of qualification which a large proportion of the students bring to their law studies. Of the juniors seven were graduates of high schools, ten had attended college at least one year, and ten were college graduates—twenty-seven out of thirty-five. Of the seniors twelve were graduates of high schools, ten had attended college at least one year, and eight were college graduates—thirty out of thirty-four.

The removal of the library to its new quarters in Orton Hall has been greatly to its advantage. The space is larger, the apartments more numerous and better arranged, and the shelving and furniture are ample, convenient and modern. The only serious drawback is the distance of the location from the buildings in which nearly all the class-work is done. The library ought to be the most central and accessible place in the University.

The total additions for the last ten years have been ten thousand four hundred and seventy-three volumes, or an average of one thousand and forty-seven a year. The additions last year numbered but nine hundred and eighty-six, and of these seven hundred and thirty-seven were presented, and one hundred and eighty-two were made by binding periodicals. This leaves but sixty-seven as the number added by purchase; and of these sixty-seven not one was ordered within the year. In other words, not a single book has been ordered since June 30, 1893. Under these circumstances it is especially gratifying that the board has given the sum of four thousand dollars to the library for the coming year. Considering the deficiency of the library and the enormous demand for books in order that the work of the University may be carried on in a liberal spirit and with free access to the sources of knowledge, the amount seems small; but it will meet many pressing needs, and we shall hope that another year a still larger book fund can be allowed.

The thanks of the University are due to the donors of valuable gifts to the library, a list of whom is furnished by the library council.

The store-room for chemical supplies has proved more just and economical to the students than the method previously in use. It also relieves the instructors from much annoyance and loss of time.

The statement of the store-room shows a net profit of two hundred and forty-two dollars and ninety-three cents on the goods sold to students. But besides the goods consumed by them, supplies were drawn from the store-room by the chemical departments to the amount of three hundred and seventy-two dollars and forty-one cents, and the salary of the storekeeper was six hundred dollars, making a loss to the University of seven hundred and twenty-nine dollars and forty-eight cents. This indicates that in order to cover the expenses of these departments the prices of supplies to students should be made just about twice what they were last year.

By an act of the legislature at its recent session, provision was made for "a course of practical and scientific instruction in the art of clay-working and ceramics in the Ohio State University." The sum of five thousand dollars was appropriated to establish and maintain it the first year, and two thousand five hundred dollars to maintain it the second year. Mr. Edward Orton, Jr., an alumnus of the University, has been chosen director. Mr. Orton is more thoroughly versed than any one else in the localities and qualities of Ohio clays, and has a practical acquaintance with clay-working in several of its branches.

A two-year course of study has been provisionally announced and the department has been temporarily located in the basement of Orton Hall. Kilns, pyrometers and all the apparatus necessary for clay analysis and manufacture will be immediately provided, and the department will be ready for the reception of students at the opening of the University next fall.

A dairy school will be another new feature of the coming year. It is to be much regretted that the legislature failed to make an appropriation for a dairy building; but the room in which it is proposed to conduct the work will meet the needs of the school fairly well for the present. If, however, it is intended to afford instruction in dairying at all adequate to its importance or comparable with that of some other similar institutions, a liberal support by the state will be indispensable.

I desire to keep alive a suggestion contained in two of my former reports concerning another department which the University still lacks but which it ought by all means to have. The State University should furnish to the schools and colleges of the state a body of capable and specially trained teachers. A larger proportion of our graduates turn to teaching for employment than to any other occupation. Out of forty-seven who graduated in the four-year courses at the last commencement, not less than seventeen either expect or desire to teach. Not a few of the grad-

uates will continue to teach for years after leaving the University. Yet they all enter on this work without any special preparation for it, and therefore at a great disadvantage. They know little of it in either practice or theory. It is true that they have seen others teach and have been taught; and much may be learned in this way. But one can no more become a teacher by such a method that he can become a chemist or a physicist by seeing some one else perform chemical or physical experiments. He needs to have his attention called to the essential things, to study the methods and suggestions of the best writers on education, and to begin his own practice under wise guidance and with the right attitude of mind.

When this subject has been added, it should be the policy of the board, as it seems to me, to refuse further additions and to concentrate the resources of the University on the expansion and strengthening of the departments already existing. There is no limit to the subjects that might be introduced; but, on the other hand, there is no limit to the possible development of what the University has already undertaken. The limit of advantageous and even needed development for our present departments is far in advance of what has yet been realized. To embarrass them and hinder their growth in order to establish new departments which will in turn be subject to the same conditions, would be a blind and mistaken course. There is scarcely a department in the University which does not need much more than it has, and some of them could make good use of many times more than they have. A university should indeed include a number of departments, just as the education of an individual should have a certain area. But when that is said, the emphasis should be laid on solidity, strength, height. We should make the structure compact and massive, and build it upward rather than outward. In this way only can it be made great, commanding and thoroughly efficient.

W. H. Scott.

Ohio State University, August 1, 1894.

Report of the President.

APPENDIX I.

TABLE I.

Showing the whole number of students in attendance and their distribution among the various courses and classes for each of the last five years.

Collegiate—	1889–90	1890–91	1891–92	1892–93[1]	1893–94[1]
Four-year courses—					
Graduates	12	7	7	13	7
Seniors	22	27	34	49	58
Juniors	28	29	40	59	77
Sophomores	49	52	65	103	118
Freshman	67	89	34	166	176
Special	22	33	40	52	74
	—188	—230	—313	—429	—503
Briefer courses—					
Agriculture	18	24	35	30	49
Veterinary medicine	5	12	21	12	10
Pharmacy	21	21	25	30	35
Short mining	14	18	25	13	10
	—58	—75	—106	—85	—104
Law—					
Graduates	...	...	2	6	3
Seniors	...	...	28	29	34
Juniors	...	...	25	26	35
Special	...	...	...	2	...
	—...	—...	—55	—67	—72
Preparatory—					
Second year	82	68	93	121	...
First year	74	100	88	64	...
Irregular	9	13	6	15	...
	—165	—181	—187	—200	—...
Totals	423	493	668	794	92
Deduct names counted twice	.....	.....	4	1	.....
Totals	.....	.....	664	793	778

[1] The figures of 1892-93 and 1893-94 throughout this Appendix are for the University year from September to June; whereas those of the previous years are for the period between the successive issues of the catalogue. The reason for this change is that the time for making the report to the governor has been changed.

TABLE II.

SHOWING THE NUMBER OF STUDENTS PURSUING STUDIES LEADING TO EACH DEGREE AND THEIR DISTRIBUTION BY YEARS.

	Totals.					B. A.					B. Ph.					B. Sc.					B. Sc. (Agr.)—H. & F.					
	1889-90	1890-91	1891-92	1892-93	1893-94	1889-90	1890-91	1891-92	1892-93	1893-94	1889-90	1890-91	1891-92	1892-93	1893-94	1889-90	1890-91	1891-92	1892-93	1893-94	1889-90	1890-91	1891-92	1892-93	1892-93	1893-94
Seniors	22	27	34	49	58	7	2	6	9	13	4	8	4	5	6	4	10	6	10	12	2	3	3	.....	1	3
Juniors	28	29	40	59	77	5	6	9	12	15	9	3	6	6	10	10	9	9	12	5	.....	2	1	.....	1	5
Sophomores	49	52	65	103	118	12	13	12	16	14	3	9	8	14	29	10	5	8	10	5	6	2	1	2	2	8
Freshmen	67	89	134	166	176	17	21	20	22	19	10	10	18	29	35	13	24	19	6	11	.....	.....	.....	10	11	5
Special	22	[2]33	40	52	74	1	6	4	5	7	9	10	15	25	46	4	1	9	9	10	.....	.....	.....	.....	.....	1
Totals	188	230	313	429	503	42	48	51	64	68	35	40	51	79	126	41	49	51	47	46	8	7	5	12	15	22

[2] Only 31 of the 33 students marked special for 1890-91 are distributed.

TABLE II—Concluded.

	C. E.					M. E.					E. M.					E. E.				Ind. Arts.	G. Ph.					D. V. M.				
	1889-90	1890-91	1891-92	1892-93	1893-94	1889-90	1890-91	1891-92	1892-93	1893-94	1889-90	1890-91	1891-92	1892-93	1893-94	1890-91	1891-92	1892-93	1893-94	1893-94	1889-90	1890-91	1891-92	1892-93	1893-94	1889-90	1890-91	1891-92	1892-93	1893-94
Seniors	2	2	9	9	8	3	.....	.....	2	2	.....	..	1	1	3	2	5	12	10	.....	3	6	6	7	3	4	.....	5	6	2
Juniors	3	6	6	10	14	1	1	2	2	4	.....	.....	.....	4	2	2	7	12	22	.....	9	6	9	5	12	.....	5	8	1	4
Sophomores	12	9	10	19	21	5	3	4	8	9	1	.....	5	.....	4	11	17	34	28	.....	9	9	10	16	20	1	7	8	5	2
Freshmen	16	14	29	26	25	11	3	11	13	13	.....	2	2	10	6	15	35	49	59	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Special	5	5	5	2	1	2	4	1	4	1	1	2	3	4	5	3	3	3	4	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
Totals	38	36	59	66	69	22	11	18	29	29	2	4	11	19	20	33	60	110	123	2	21	21	25	30	35	5	12	21	12	8

TABLE III.

SHOWING THE NUMBER OF STUDENTS IN THE GENERAL, THE TECHNICAL, AND THE PROFESSIONAL COURSES.

	1889–90	1890–91	1891–92	1892–93	1893–94
General courses	118	137	151	194	245
Technical courses	128	166	259	381	368
Professional courses	.....	.....	55	67	72
Unclassified special	.....	2	.....	.....	1
Totals	246	305	465	642	686

TABLE IV.

SHOWING THE NUMBER OF WOMEN AND THEIR DISTRIBUTION AMONG THE COURSES AND CLASSES.

	Totals.					B. A.					B. Ph.					B. Sc.					C. E.		E. E.				G. Ph.			LL. B.
	1889-90	1890-91	1891-92	1892-93	1893-94	1889-90	1890-91	1891-92	1892-93	1893-94	1889-90	1890-91	1891-92	1892-93	1893-94	1889-90	1890-91	1891-92	1892-93	1893-94	1892-93	1893-94	1890-91	1891-92	1892-93	1893-94	1891-92	1892-93	1893-94	1892-93
Graduates	3	2	2	5	6	....	....	1	2	2	2	....	....	2	4	1	2	1	1	....	....	....	....	....	....	....	....	....	....	....
Seniors	5	5	5	8	8	2	....	1	2	4	3	4	2	4	3	....	1	2	1	1	....	....	....	....	1	....	....	....	2	1
Juniors	6	4	7	7	15	2	1	2	3	8	3	1	3	3	6	1	2	2	1	1	....	....	....	....	....	....	4	2	2	....
Sophomores	5	7	6	18	11	1	2	2	9	4	2	4	3	8	7	2	1	....	1	....	....	....	....	1	....	....	4	3	....	....
Freshmen	11	11	26	19	26	2	4	10	6	10	6	5	13	11	15	3	1	3	1	....	1	....	1	....	....	....	....	....	....	....
Special	7	11	12	23	34	1	3	1	1	2	6	8	9	17	27	....	....	2	5	4	....	1	....	....	....	1	....	....	....	....
Totals	37	40	58	80	94	8	10	17	23	28	22	22	30	45	58	7	7	10	10	6	1	1	1	1	1	1	8	5	4	1
Preparatory	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Second year	10	12	10	13	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
First year	11	10	14	15	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Irregular	3	4	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Totals	24	26	24	33	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Totals	61	66	82	113	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE V.

SHOWING THE WHOLE NUMBER OF DEGREES IN COURSE CONFERRED SINCE THE FOUNDING OF THE UNIVERSITY.

	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894
Bachelor of arts	1	1	6	2	2	1	5	4	6	8	6	1	7	2	6	9	12
Bachelor of philosophy	...	...	...	2	.....	2	2	1	1	2	6	7	4	8	8	5	5
Bachelor of science	5	5	1	2	5	3	2	4	2	4	4	8	2	10	7	11	7
Bachelor of science in Agri're	...	...	...	...	.....	.....	.....	1	1	.....	.....	.....	2	3	3	.....	.....
Bachelor of science in H. & F.	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3
Civil engineer	...	...	...	...	.....	1	1	1	3	3	4	1	2	2	7	9	7
Mechanical engineer	...	...	1	...	2	4	1	3	1	2	4	2	3	2	5	2	1
Electrical engineer	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	... ..	.....	4	9	8
Engineer of mines	...	...	1	1	.....	.....	1	2	4	1	4	2	.....	.....	1	1	4
Graduate in pharmacy	...	...	...	...	.....	.....	.....	.....	.....	3	.....	2	3	6	5	5	3
Doctor of veterinary medicine	...	...	...	...	.....	.....	.....	.....	.....	1	.....	1	4	.....	4	5	.....
Master of arts	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	1	1	1	2	.. .	.....
Master of science	...	...	...	1	.....	.....	.....	.....	.....	.....	.....	1	1	2	2	.....	2
Doctor of philosophy	...	1	...	...	.....	.....	.....	.....	.....	... ..	.....	.....	.....	.....	.....	.....	1
Doctor of science	...	...	...	...	.....	.....	.....	.....	.....	. ...	.....	.....	1	... ..	.....	.....	.....
Bachelor of laws	...	...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	18	15
Master of laws	...	...	...	...	.....	.....	.....	.....	.....	.....	... .	.....	.....	.....	2	4	2
Totals	6	7	9	8	9	11	12	16	18	24	28	26	30	36	65	79	70

APPENDIX II.

EXHIBIT OF THE WORK OF INSTRUCTION DURING THE YEAR 1893-94.

No. of course.	Amount and kind of work.	Instructor.	Year and course.	Hours per week.[1]	No. of students.
	AGRICULTURE.				
1	Agriculture.—Lectures and recitations	Professor Hunt	2d year, short course	3-3-4	13-14-12
2	Domestic Animals	Professor Hunt	2d year, short course	4-4-4	18-23-20
4	Advanced Agriculture.—Lectures and recitations (not given in 1893-94)	Professor Hunt	Senior	2-2-2	
	AGRICULTURAL CHEMISTRY.				
1	Lectures and laboratory practice	Professor Weber and Mr. Bloomfield	1st year	5-0-0	121-0-0
2	Lectures and laboratory practice	Professor Weber and Mr. Bloomfield	1st year, Agr'l and Veterinary courses	0-5-5	0-38-29
3	Analytical Chemistry	Professor Weber and Mr. Bloomfield	Freshmen, Engineering courses	0-5-0	0-75-0
4	Laboratory practice	Professor Weber and Mr. Bloomfield	2d year	3-3-3	7-7-5
5	Lectures and laboratory practice	Professor Weber	Senior	3-3-3	0-0-3
6	Lectures and laboratory practice	Professor Weber		0-0-5	0-0-6
	ASTRONOMY.				
1	Descriptive Astronomy	Mr. Lord	Senior	0-0-5	0-0-10
2	Mathematical Astronomy	Mr. Lord	Junior	0-3-3	0-18-11
3	Advanced Astronomy	Mr. Lord		0-5-0	0-1-0

(1) In laboratory work, field work and drawing, one hour is equal to two hours by the clock.

	BOTANY.				
1	Elementary.—Lectures and recitations	Professor Kellerman and Mr. Wilcox	1st Prep., 1st year Agr'l and 2d year Vet	0–0–5	0–0–58
2	General.—Lectures, laboratory and field work	Professor Kellerman and Mr. Wilcox	Freshman	2–2–2	17–16–13
3	Special.—Lectures and laboratory work	Professor Kellerman and Mr. Wilcox	2d yr. Agr'l, 2d yr. Vet	5–5–5	23–6–7
4	Medical.—Lectures and laboratory work	Professor Kellerman and Mr. Wilcox	2d yr. Pharm. and 2d yr. Vet	0–2–0	0–12–0
5	Advanced laboratory work	Professor Kellerman and Mr. Wilcox	3d and 4th yrs. Elective in General and Agrl.	5–5–5	1–2–3
5*a*	Laboratory work	Professor Kellerman		2–2–2	1–1–1
	CHEMISTRY.				
1, 2	Elementary.—Lectures, with Norton's text-book	Professor Norton	Freshman	4–2–4	64–53–47
3	Qualitative Analysis.—Laboratory work	Professor Norton and Assistant Professor McPherson	Sophomore and Junior	5–5–5	29–27–27
4	Quantitative Analysis.—Laboratory work; weekly lectures	Professor Norton and Assistant Professor McPherson	Junior and Senior	5–5–5	5–5–5
5	Proximate Organic Analysis	Assistant Professor McPherson	3d year in Pharmacy	1–3–2	5–5–6
6	Special laboratory work	Professor Norton and Assistant Professor McPherson		5–3–5	11–9–8
	CIVIL ENGINEERING.				
1	Land Surveying.—Instruction by text-book, lectures and practice with instruments	Mr. Kemmler	Soph. yr. C. E. course	5–0–0	24–0–0
2	Railroad Surveying.—Instruction by text-book and field practice	Mr. Kemmler	Soph. yr. C. E. course	0–0–5	0–0–25
3	Topographical Surveying.—Instruction by text-book, lectures and practice	Mr. Kemmler, field work and drawing	Junior yr. C. E. course	5–0–0	18–0–0
4	Technical Drawing, Platting.—Pen and colored topography	Mr. Kemmler	Soph. yr. C. E. course	0–3–0	0–26–0
5	Technical Drawing	Mr. Kemmler	Junior yr. C. E. course	0–3–3	0–12–0
6	Stereotomy.—Instruction by text-book, drawing and practice	Mr. Kemmler	Junior yr. C. E. course	0–5–0	0–15–0

EXHIBIT OF THE WORK OF INSTRUCTION—Continued.

No. of course.	Amount and kind of work.	Instructor.	Year and course.	Hours per week.	No. of students.
	CIVIL ENGINEERING—Concluded.				
7	Strains in Framed Structures.—Instruction by text-book and problems; two sections	Prof. Brown and Mr. Kemmler	Junior yr. C. E. course	0-0-5	0-0-20
8	Bridge Designing.—Instruction by text-book, problems and lectures	Professor Brown	Senior yr. C. E. course	5-0-0	8-0-0
9	Civil Engineering.—Instruction by text-book, lectures and general reading	Professor Brown	Senior yr. C. E. course	5-5-5	8-12-8
10	Sanitary Engineering.—Instruction by text-book, lectures and general reading	Professor Brown	Senior yr. C. E. course	0-0-5	0-0-6
12	Civil Engineering.—Laboratory	Prof. Brown and Mr. Kemmler	Senior yr. C. E. course	0-5-5	0-3-5
13	Field Measurements.—Instruction by text-book, lectures and field practice	Mr. Kemmler	1st year short Agr'l, and Soph. Agr'l	0-0-3	
			Freshman, C. E. E. M.	2-0-0	110-106-32
			Mech. Eng. Short Min. and Freshman E. E.	0-1-1	
			Sophomore B. Sc.	1-1-1	
			Sophomore B. A. and B. Ph. elective	1-1-1	
	DRAWING.				
1	Freehand	Mr. Taylor			
2	Lettering	Associate Professor Bradford and Mr. French	Freshman Engineering and 2d yr. Short Min.	0-0-2	0-0-81
3	Mechanical Drawing	Associate Professor Bradford and Mr. French	Sophomore Engineeri'g	3-3-3	72-68-26
			and Short Min	3-5-3	
4	Draughting and Blue Printing	Associate Professor Bradford..	Short Mining	0-3-0	0-2-0
5	Technical Drawing	Associate Professor Bradford..	Junior	3-0-0	30-0-0
7	Photography.—Lectures and practice	Associate Professor Bradford..	Senior M. E. and E. M. Junior C. E.	2-0-2	6-0-17
8	Mechanical Drawing.—Lectures and practice	Associate Professor Bradford and Mr. French	Freshman yr. Industrial Arts	2-2-2	2-1-1

	ENGLISH.				
	I. Rhetoric.				
1	Practical Rhetoric—Three sections	Associate Professor Denney	Freshman	2-2-2	200-190-173
2	Science of Rhetoric	Associate Professor Denney	Soph. and Jun. in Arts, Phil. and Science	2-2-2	56-55-52
3	Advanced Rhetoric	Associate Professor Denney	Sophomore and Junior Engineering	2-2-2	52-53-46
4	Advanced Composition	Associate Professor Denney		2-2-2	6-6-6
5	Prose Writing	Associate Professor Denney	Junior and Senior	2-2-2	12-13-12
6	Advanced Philology	Associate Professor Denney	Senior	2-2-2	1-1-1
7	Old English	Associate Professor Denney	Junior	2-2-2	13-13-13
	II. ENGLISH LITERATURE.				
8	Chaucer—English Literature, Lectures and Recitations	Associate Professor Chalmers	Sophomore	2-2-2	95-52-51
9	Literature—Study of Masterpieces	Associate Professor Chalmers	Junior and Senior	2-2-2	14-14-12
10	Shakespeare and the English Drama	Associate Professor Chalmers	Junior and Senior	3-3-3	54-21-22
11	English Bible, Bacon, Milton (Not given in 1893-94)	Associate Professor Chalmers	Junior and Senior	3-3-3	
12	English Literature of the 18th Century	Associate Professor Chalmers	Junior and Senior	3-3-3	16-13-13
13	Nineteenth Century Literature (Not given in 1893-94)	Associate Professor Chalmers	Junior and Senior	2-2-2	
14	Special advanced Study and Research	Associate Professor Chalmers	Junior and Senior	3-3-3	9-12-5
	GEOLOGY.				
1	Physical Geography	Dr. Bascom	2d Preparatory—1st yr. Pharmacy and Short Agr'l and Mining	0-0-5	0-0-85
2	General Geology—Lectures and portions of Le Conte's "Elements of Geology"	Professor Orton & Dr. Bascom	Senior B. A., B. Ph., B. Sc., Junior C. E.	5-5-0	29-28-0
3	Economic Geology—Lectures and references	Professor Orton	Senior E. M.	0-5-0	0-13-0
4	Elementary Geology—Lectures	Professor Orton	Junior M. E. and 2d. yr. Short Mining	0-5-0	0-3-0
5	Paleontology	Professor Orton	Post-graduate		1-1-1
6	Petrography	Dr. Bascom	Elective	2-2-2	4-2-2

EXHIBIT OF THE WORK OF INSTRUCTION—Continued.

No. of course.	Amount and kind of work.	Instructor.	Year and course.	Hours per week.	No of students.
	GERMAN LANGUAGE AND LITERATURE.				
	Second Preparatory	Mr. Mesloh	2d Preparatory	5-5 5	13-13-13
1	Elementary German	Mr. Mesloh	Freshman, Science and Engineering	5-5-5	54-38-30
2	Scientific Reading	Mr. Mesloh	Sophomore, Science and Engineering	2-2-2	17-13-14
3	Elementary German	Professor Eggers	Freshman B. Ph. (M.L.) Soph. B. A. & B. Ph.(L.) Jun.—Agr. and Hort.	5-5-5	24-23-15
4	Literature and Composition	Professor Eggers	Fresh. B. Ph. (M. L.) Soph. B. Ph. (L.) & B.A. (elective;) Jun. B A. & B.Ph. (L.) elective.	3-3-3	21-19-12
5	Modern German Literature	Professor Eggers	Senior B. A. and B. Ph. (elective.)	3-3-3	5-5-5
6	Faust	Professor Eggers.	Senior B. Ph. (M. L.)	3-3-3	Not given
	GREEK.				
1	Elementary Greek—Recitations	Professor Smith	Freshman	5-5-5	26-22-21
2	Xenophon, Herodotus, Homer	Professor Smith	Sophomore	3-3-3	13-13-12
3	Greek History, Philosophy and Oratory—Recitations, essays and lectures	Professor Smith	Junior	3-3-3	19-20-19
4	Epic Poetry, Drama, Satire—Recitations and lectures	Professor Smith	Senior	3-3-3	12-12-12
5	Ancient Art	Professor Smith	Elective	2-2-2	11-11-8

	HISTORY.				
1	Mediæval European History	Assistant Professor Siebert	Sophomore	2-2-2	38-29-27
2	Modern European History	Professor Knight	Senior	3-3-3	17-14-16
3	English History	Professor Knight and Assistant Professor Siebert	Junior	3-3-3	11-9-8
4	Constitutional and Political History of the U. S.	Professor Knight	Junior	2-2-2	79-70-69
6	Period of Protestant Reformation	Assistant Professor Siebert	Elective	3-0-0	7-0-0
7	French Revolution	Assistant Professor Siebert	Elective	0-3-3	0-6-5
	HORTICULTURE.				
1	Elements	Professor Lazenby	2d year, short Agr'l.	2-2-2	16-18-13
2	General Horticulture	Professor Lazenby	2d year, short Agr'l	3-3-3	
3	Arboriculture, Forestry and Landscape Gardening	Professor Lazenby	Senior, Horticulture and Forestry	5-3-0	4-4-3
4	Floriculture	Professor Lazenby	Senior, Horticulture and Forestry	0-3-2	3-4-4
	INDUSTRIAL ARTS.				
1	Carpentry and Pattern Making	Mr. Weick	Freshman & Sophom're.	3-3-3	31-54-60
2	Forging	Mr. Combs	Sophomore	3-3-3	42-34-18
3	Elementary Machinery Work	Mr. Knight	Sophomore	0-0-2, 3	4-35-31

No. of course.	Amount and kind of work.	Instructor.	Year and course.	Hours per week.	No. of students.
	LATIN LANGUAGE AND LITERATURE.				
	I. Preparatory.				
	Virgil, Latin Composition	Mr. Elden	2d Preparatory	5–5–5	18–17–13
	II. Collegiate.				
1	Livy, Horace	Professor Derby	Freshman	5–5–5	40–37–35
2	Roman Literature	Professor Derby	Sophomore	5–5–5	28–26–25
3	Late Latin and Late Institutions of Rome	Professor Derby	Junior (elective)	3–3–3	5–5–7
4	Pharmaceutical Latin	Mr. Dye	1st year Pharmacy	5–5–2	19–15–13
	MATHEMATICS.				
	I. Preparatory.				
	Plane Geometry	Asst. Prof. McCoard, two sec. Mr. Arnold, two sections Mr. Lord, one section Asst. Prof. Sperr, one section	2d Preparatory and Short Mining	5–0–0	80–0–0
	Solid Geometry	Asst. Prof. McCoard, two sec. Mr. Arnold, one section	2d Preparatory and Short Mining	0–5–0	0–84–0
	Plane Trigonometry	Asst. Prof. McCoard, two sec. Mr. Arnold. one section	2d Preparatory, Gen'l Courses, and 1st year Short Mining	0–0–5	0–0–67
	II. Collegiate.				
1	Algebra	Mr. Arnold	1st year Short Agr'l	5–0–0	18–0–0

	MATHEMATICS—Concluded.				
5	Trigonometry, Higher Algebra, Analytical Geometry	Prof. Bohannan and Mr. Arnold	Freshman, Arts, Phil. and Science	3-3-3	48-33-23
6	Same as course five	Asst. Prof. McCoard, Mr. Arnold and Mr. Lord	Freshman, Engineering	5 {2 / 3-5	107-143-93
7	Analytical Geometry and Calculus	Professor Bohannan, Mr. Lord and Mr. Arnold	Sophomore	5-5-5	64-61-59
8	Least Squares	Professor Bohannan	Junior	3-0-0	
9	Advanced Mathematics	Professor Bohannan	Elective	5-5-5	3-10-9
10	Advanced Mathematics	Professor Bohannan	Elective	5-0-0	3-0-0
11	Differential Equations	Professor Bohannan	Elective	1-0-0	2-0-0
12	Modern Geometry (Elementary)	Professor Bohannan	Freshman	0-2-0	0-16-0
	MECHANICAL ENGINEERING.				
2	Testing Laboratory	Professor Robinson and Mr. Hitchcock	Junior and Senior	3 to 5	6-13-22
3	Mechanism.—Lectures, drawings and constructions	Professor Robinson	Junior	2-5-3	26-27-3
4, 5	Invention.—Designing and drawing	Prof. Robinson and Asst. Prof. Bradford	Senior	5-0-5	3-0-1
6	Analytical Mechanics	Professor Robinson	Junior	5-5-0	46-45-0
7	Strength of Materials	Professor Robinson	Junior	0-0-5	0-0-40
8	Thermodynamics	Professor Robinson	Senior	5-0-0	17-0-0
9	Prime Movers	Professor Robinson	Senior	0-5-0	0-9-0
10	Machinery and Mill Work	Professor Robinson	Senior	0-0-5	0-0-11
	MILITARY SCIENCE AND TACTICS.				
1	Theoretical instruction in tactics, covering the school of the company and the important battalion movements	Second Lieut. Wilson	Freshman	0-2-0	0-101-0

EXHIBIT OF THE WORK OF INSTRUCTION—Continued.

No. of course.	Amount and kind of work.	Instructor.	Year in course.	Hours per week.	No. of students.
	MILITARY SCIENCE AND TACTICS—Concluded.				
2.	"Art of War" and Military Signaling	Second Lieut. Wilson	Sophomore	0-2-0	0-66-0
3.	Practical Drill in the various forms of Military Movement	Second Lieut. Wilson	All male students except Juniors and Seniors		353
	MINING AND METALLURGY.				
	I. Metallurgy.				
1.	Mineralogy.—Lectures	Professor Lord	Freshman, Sophomore	0-3-0	0-60-0
2.	Mineralogy.—Lectures	Professor Lord	Freshman C. E. & E. M.	0-0-3	0-0-30
3.	Determinative Mineralogy	Professor Lord	Junior	0-0-5	0-0-8
4.	Metallurgy.—Lectures	Professor Lord	Junior	5-5-0	9-8-0
5.	Metallurgical Laboratory	Professor Lord	Junior	5-5-5	20-18-20
6.	Assaying, lectures and practical work	Professor Lord	Senior	0-5-0	0-7-0
7.	Metallurgical Construction	Assistant Professor Sperr	Senior	3-0-0	3-0-0
8.	Ore Dressing.—Lectures	Professor Lord	Senior	0-0-5	0-0-3
9.	Mineral Chemistry.—Lectures and laboratory practice	Professor Lord	2d year. Short Min.	5-2-5	2-2-2
10.	Plans and Specifications	Assistant Professor Sperr	Senior	0-0-5	0-0-4
	II. Mine Engineering.				
	Short Mining Algebra. (Course 1 in Department of Mathematics)	Assistant Professor Sperr	1st year	5-5-5	8-6-6
1.	Mine Surveying	Assistant Professor Sperr	2d year	5-0-0	2-0-0

	II. Mine Engineering—Concluded.				
2.	Ventilation	Assistant Professor Sperr	2d year	0–5–0	0–2–0
3.	Mine Operating	Assistant Professor Sperr	2d year	0–0–5	0–0–3
4.	Mine Surveying.	Assistant Professor Sperr	Junior E. M.	5–0–0	5–0–0
5.	Mine Engineering	Assistant Professor Sperr	Junior E. M.	5–5–5	3–3–3
	PHARMACY.				
1, 2.	Lectures, laboratory work and the compounding of officinal preparations by the student	Associate Professor Kauffman	2d year. Pharm. and Vet.	3–5–5	21–16–16
3.	Lectures and laboratory work	Associate Professor Kauffman	3d year Pharmacy	5–3–5	6–6–6
4.	Prescription writing	Associate Professor Kauffman			0–6–0
	PHILOSOPHY.				
1.	Psychology	Assistant Professor Coler	Junior	3–3–0	42–42–0
2.	Ethics	Assistant Professor Coler	Junior	0–0–3	0–0–38
3.	Logic	Assistant Professor Coler	Senior	3–3–0	25–24–0
4.	History of Philosophy	Assistant Professor Coler	Senior	0–0–3	0–0–26
5.	Recent Philosophy	President Scott	Senior	2–2–2	3–3–3
7.	Logic	President Scott	Freshman B. Ph. (E)	2–0–0	38–0–0
8.	Psychology	President Scott	Freshman B. Ph. (E)	0–2–2	0–30–28
9.	Ethics	Assistant Professor Coler	Sophomore B. Ph. (E)	3–0–0	17–0–0
10.	History of Philosophy	Assistant Professor Coler	Sophomore B. Ph. (E)	0–3–3	0–18–17

No. of course.	Amount and kind of work.	Instructor.	Year in course.	Hours per week.	No. of students.
	PHYSICS AND ELECTRICAL ENGINEERING.				
	I. Physics.				
1.	Elementary Physics	Mr. Boyd	1st yr. Pharm. Short Agr. Short Min and 2d Prep.	5–5–0	139–108–0
2.	Physics—Lectures and experiments	Professor Thomas	Sophomore	3–3–3	82–64–58
3.	Physics—Problems	Mr. Boyd	Electrical course	2–2–2	38–32–28
4.	Electricity and Magnetism—Lectures and Recitations	Professor Thomas	Junior	2–0–0	18–0–0
5.	Physical Laboratory	Mr. Boyd and Mr. Brown	Sophomore	0–5–5	34–66–47
6.	Physical Laboratory—Experiment, investigation and research by the students	Prof. Thomas and Mr. Boyd	Junior and Senior	5–5–5	
	II. Electrical Engineering.				
1, 2.	Electrical Engineering—Lectures	Professor Thomas	Senior	3–5–3	11–11–11
3.	Technical Drawing	Assistant Professor Caldwell	Senior	3–3–5	11–11–11
4.	Electrical Laboratory—Experiment, investigation and research by students	Professor Thomas and Assistant Professor Caldwell	Senior	3–5–5	11–11–11
5.	Electrical Engineering—Mining Course	Assistant Professor Caldwell	Senior	2–2–2	4–4–4
	PHYSIOLOGY.				
1.	Human Anatomy and Physiology—Lectures, recitations and laboratory work	Professor Bleile	Sophomore 1st year Veterinary 2d year Pharmacy	3–3–3	62–50–55

	PHYSIOLOGY—Concluded.				
2.	Human Anatomy and Physiology—Lectures, recitations and demonstrations	Professor Bleile	2d year. Short Ag'rl	0–5–5	0–13–11
3.	Physiological Laboratory	Mr. Morrey	Junior and Senior	3–3–3	10–9–9
4.	Histology—Laboratory work	Professor Bleile and Mr. Morrey	1st and 2d year Vet. Junior and Senior B. A., B. Ph., B. Sc.	5–5–5	8–8–8
5.	Microscopy—Laboratory work	Professor Bleile and Mr. Morrey	2d year Pharmacy	0–0–2	0–0–10
	POLITICAL SCIENCE.				
1.	Political Economy—Two sections	Professor Knight	Junior and Senior	2–2–2	69–62–56
2.	Advanced Economics and Finance	Professor Knight	Senior	2–2–2	12–12–12
3.	International Law	Professor Knight	Junior and Senior	2–2–0	17–14–0
4.	Municipal Government	Professor Knight	Junior and Senior	0–0–2	0–0–13
5.	Development of Industrial Society	Professor Knight	Elective	3–0–0	11–0–0
6.	Socia ism and Communism	Professor Knight	Elective	0–3–3	0–11–10
	ROMANCE LANGUAGES.				
1.	Elementary French	Associate Professor Bowen and Mr. Elden	Freshman Sophomore.. Junior Elective..	5–5–5	118–101–91
2.	Prose, Lyrics and Drama	Associate Professor Bowen	Sophomore B. Ph. Jun. and Sen. elective	3–3–3	41–41–39
3.	Scientific Reading	Associate Professor Bowen and Mr. Elden	Sophomore	2–2–2	22–23–21
4.	Advanced Course	Associate Professor Bowen	Junior and Senior	3–3–3	7–7–3
1.	Spanish	Associate Professor Bowen	Jun. and Sen. (elective)	2–2–2	13–10–10

No. of course.	Amount and kind of work.	Instructor.	Year in course.	Hours per week.	No. of students.
	VETERINARY MEDICINE.				
1.	Veterinary Anatomy—Lectures and recitat'ns	Dr. White	1st year	3-5-3	10-8-9
2.	Anatomical Laboratory	Dr. White	2d year	0-3-0	
3.	Pathology and Therapeutics	Professor Detmers	3d year	3-3-3	14-11-9
4.	Surgical Diseases and Operations—Lectures	Professor Detmers	3d year	5-5-0	5-5-0
5.	Obstetrics—Lectures and demonstations	Professor Detmers	3d year	0-0-5	0-0-5
6.	Principles of Horse-Shoeing—Lectures and demonstrations	Dr. White	3d year	0-0-5	0-0-7
7.	Bacteriology—Lectures	Professor Detmers	3d year	3-3-0	
8.	Clinical Practice	Professor Detmers and Dr. White	2d and 3d years	5-5-5	6-6-6
9.	Pharmacology	Dr. White	2d year Veterinary and 3d year Pharmacy	3-3-0	5-5-0
	ZOOLOGY AND ENTOMOLOGY.				
1.	Zoology	Professor Kellicott	Junior B. Agr.	5-5-5	15-12-12
			Jun. & Sen. B. A. & Ph.	5-5-5	
2.	Zoology	Professor Kellicott	Junior and Senior	3-3-3 5-5-5	8-8-8
3.	Comparative Anatomy—Lectures and laboratory	Professor Kellicott	Soph. B. A., Jun. B. Sc.	3-3-3	6-5-6
4, 5.	Economic and Systematic Entomology	Professor Kellicott	Short Agriculture Jun. and Sen. B. Agr.	0-0-3	0-0-14
6.	Advanced Entomology	Professor Kellicott	Elective		2-2-2

COLUMBUS, OHIO, *June 30, 1894.*

To the Honorable DAVID M. MASSIE, *President of the Board of Trustees, Ohio State University :*

SIR: I beg to submit herewith my annual report for the fiscal year ending this 30th day of June, 1894.

Respectfully Yours,

F. W. PRENTISS, *Treasurer.*

STATEMENT No. I.

DETAILED STATEMENT OF RECEIPTS, BY F. W. PRENTISS, TREASURER, DURING FISCAL YEAR ENDING JUNE 30, 1894.

Date.	From whom received.	For what purpose.		Amount.
1893.				
June 6	To balance			$7,739 26
July 27	U. S. Treasurer	App. for year ending June 30, 1894, New Morrill fund		19,000 00
	L. D. Evans	Rent for July, 1893		20 00
	Seasongood & Mayer	Sale of certif's of indebtedness		10,000 00
Aug. 10	Auditor of State	O. S. U. fund		2,400 00
12	"	"		2,600 00
24	Comnrs. Sinking Fund	Interest on endowment		5,000 00
Sept. 27	L. D. Evans	Rent for Aug., '93	$20 00	
	R. D. McCarter	Acct. rent, chapter house	88 00	
	L. D. Evans	Acct. rent for Sept., '93	20 00	
				128 00
Oct. 21	Alexis Cope, Bursar	Fees, fall term, '93	$6,888 55	
	W. H. Scott	Gas to April, '93	36 90	
	"	1st inst. rent, '93-'94	38 50	
	Geo. W. Knight	9th inst. rent, '92-93	37 50	
	Benj. F. Thomas	8th, 9th, 10th, inst. rent, '93-94	127 50	
	R. D. McCarter	Gas to April 1, '93	35 50	
				7,164 45
	Comnrs. Sinking Fund	Interest on endowment		5,000 00
Nov. 4	Auditor of State	O. S. U. fund		8,550 00
25	"	O. S. U. fund	$8570 00	
	"	O. S. U. fund	3300 00	
				11,870 00
	Geo. W. Knight	10th inst. rent, '92-93	$37 50	
	L. D. Evans	Rent October, 1893	20 00	
	W. H. Scott	Sale of limestone, etc	10 15	
	"	2d inst. rent, '93-94	38 50	
	B. F. Thomas	1st and 2d inst. rents, '93-94	85 00	
				191 15
Dec. 11	Auditor of State	O. S. U. fund	$8,585 00	
	"	State app. weights and measures	454 56	
	"	O. S. U. fund	5,659 76	
				14,699 32
	Benj. F. Thomas	Gas. Apr. 15, '92 to Apr. 1, '93	$32 70	
	"	Rent 3rd inst. '93-94	42 50	
	L. D. Evans	" Nov., 1893	20 00	
	John C. Loughren	Small tract V. M. lands	10 00	
	Edward J. Aston	Am't overpaid on acct	8 95	
				114 15
23	Comnrs. Sinking Fund	Interest on endowment		6,353 86
	Alexis Cope, Bursar	Term fees, fall term, '93		716 50
1894.	W. H. Scott	3rd inst. rent '93-94		38 50
Jan. 16	L. D. Evans	Rent for Dec. 1893	$20 00	
	Rob't McCarter, Jr	Acct. rent, chapter house	50 00	
				70 00
	Alexis Cope, Bursar	Fees, winter term 93-94		4,314 05
Feb. 3	S. E. Barrett M'f'g. Co	For 30 bbls. coal tar @ 1 50	$55 50	
	Alexis Cope, Bursar	Term fees of students	405 00	
				460 50
	Comnrs. Sinking Fund	Interest on endowment		2,500 00
16	Auditor of State	State app. for cost of cases, etc., weights and measures		131 20

STATEMENT No I—Concluded.

Date.	From whom received.	For what purpose.		Amount.
24	Comnrs. Sinking Fund	Interest on endowment.....		$2,500 00
	R. D. McCarter, Jr.....	Rent, chapter house.	$50 00	
	L. D. Evans.....	" January, 1894.....	20 00	
				70 00
1894.				
Mar. 17	Auditor of State.....	O. S. U. fund.....		17,170 00
29	B. F. Thomas.....	4, 5, 6 inst. rent, 93–94.....	$127 50	
	W. H. Scott.....	4–5 inst. rent, 93–94.....	77 00	
	Alexis Cope, Bursar.....	Fees, winter and spring term, '93–'94	3,769 50	
				3,974 00
	Comnrs. Sinking Fund.....	Interest on endowment.....		3,000 00
Apr. 6	Auditor of State.....	O. S. U fund.....	$8,585 00	
	"	"	2,043 91	
				10,628 91
	L. D. Evans.....	Rent for February, 1894.....	$20 00	
18	Geo. W. Knight	Gas from 4–15, '93 to 4–1, '93	51 70	
				71 70
	"	1, 2, 3, inst. rent, '93–'94...	$112 50	
	B. W. Thomas.....	7th " ...	42 50	
	R. D. McCarter, Jr.....	Acct. rent, chapter house..	100 00	
	Geo. W. Knight	4th inst. rent, '93–'94.....	37 50	
	W. H. Scott	6th and 7th "	77 00	
				369 50
May 4	Comnrs. Sinking Fund	Interest on endowment.....		3,000 00
	Auditor of State.....	O. S. U. fund.....		8,585 00
24	Comnrs. Sinking Fund	Interest on endowment.	$2,000 00	
	Alexis Cope, Bursar.....	Fees of students, sale of lab. sup.....	1,015 00	
	W. H. Scott	8th inst. rent, 93–94.....	38 50	
	Geo. W. Knight.....	5, 6, 7 inst. rent 93–94.....	112 50	
	R. D. McCarter.....	Acct. rent, chapter house	90 00	
				3,256 00
26	Auditor of State..	Req. No. 31 O. S. U fund.....		8,585 00
June 4	Seasongood & Mayer.....	Premium on exchange of certificates of indebtedness ..	$3125 00	
	Alexis Cope, Sec'y.....	16 deeds, V. M. L. act of Mar. 14, 1889	32 00	
	S. E. Barrett M'f'g Co.....	16½ bbls. coal tar @ 1 50	24 75	
				3,181 75
8	B. F. Thomas.....	8th and 9th inst.rent '93–94	$85 00	
	Sidney A. Norton.....	Supplies sold student'92–93	46 64	
	Alexis Cope, Bursar.....	Store room sup. sold students.....	412 30	
				543 94
15	Auditor of State.....	O. S. U. fund		860 00
29	Comm'rs Sinking Fund.....	Interest on endowment.....		3,375 91
	Geo W. Knight.....	Fees of students, '93–94	$15 00	
	W. H. Scott.....	9, 10 inst. rent, '93–'94.....	77 00	
				92 00
30	B. F. Thomas.....	Rent, 10th inst. '93–'94.....	42 50	
	"	Gas to April 1, 1894.....	29 70	
	A. Cope, Bursar	Diploma fees, law students	80 00	
	"	Bal. due store room acct....	255 28	
				407 48
	Total receipts.....	....		178,732 13
	To Balance.....	....		5 051 56
				183,783 69

STATEMENT II.

DETAILED STATEMENT OF DISBURSEMENTS BY F. W. PRENTISS, TREAS., DURING FISCAL YEAR ENDING JUNE 30, 1894.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
July 12	W. I. Chamberlain	Exp. at meeting this day	1	$13 30
13	William J. Whyte	Est. No. 3 stone carving Orton Hall	2	475 00
	T. J. Godfrey	Exp. meeting July 11, 13, 1893, trip to Cin.	3	25 70
	Nichol & Carr	Final est. No. 14 Hayes Hall	4	1,530 80
	William Bard	40 hrs. work grading, man & team	5	14 00
	Owen Morris	40 hrs. work with team on grounds	6	12 00
	H. Judd	Carpenter work	7	26 65
	Kelley & Co.	Repairing plumbing, chapter house	8	16 25
15	Geo. K. Nash	Services as inst. law sch	9	122 33
	D. F. Pugh	" "	10	157 17
	I. N. Abernethy	" "	11	63 15
	J. H. Collins	" "	12	82 79
	O. W. Aldrich	" "	13	194 36
	M. G. Evans	" "	14	37 61
	J. P. Jones	" "	15	146 32
	E. N. Huggins	" "	16	105 33
	S. C. Jones	" "	17	258 24
	R. H. Platt	" "	18	157 16
	E. O. Randall	" "	19	141 53
	Geo. W. Knight	" "	20	52 32
	W. F. Hunter	" "	21	186 65
	J. H. Dyer	" "	22	135 41
	Florizel Smith	" "	23	100 30
	D. K. Watson	" "	24	22 13
	J. A. McEwen	" "	25	3 05
	B. F. Woodbury	" "	26	12 10
	T. J. Keating	" "	27	17 00
	Emmet Tompkins	" "	28	15 70
	E. L. DeWitt	" "	29	6 10
	Cyrus Huling	" "	30	13 25
	John Thompson	110 hrs. labor man and team on grounds @ 30c	31	33 00
	Wallace C. Dill	Man & team, labor on grounds June, 1893	32	69 00
	W. Standley	24½ days helper to eng., @ 15c.	33	36 75
	Frank Stratton	Est. No. 7 steam fitg. steam ht'g plant	34	300 00
	Henry Redout	260 hrs. labor on g'ds @ 15c	35	39 00
	Stephen Ervin	271 " "	36	40 65
	C. B. Morrey	Sup. dept. chem. & phy	37	11 71
	L. B. Wing	Exp. attending meet'g board and committee	38	11 15
	B. F. Thomas	Exp. to Pittsburg and Chicago, acct. power plant	39	41 92
17	W. R. Beattie	240 hrs. w'k hort. dept. @ 15c.	40	36 00
	Col. & H. C. & I. Co.	35 19/20 tons pea coal @ 1.50	41	53 32
19	J. M. Zeigler	23 hrs. janitor w'k Hayes hall.	42	3 45
	Engelke & Bigelow	Freight and hauling	43	38 92
	C. H. Woodruff	198 hrs. carp. work	44	54 98
	E. E. Bogue	154 hrs. work green house	45	23 10
	E. B Adams & Co.	Lumber for com. platform	46	26 30
20	Cent. Elect. Co.	Materal for wiring Orton hall.	47	78 99
21	John Fisher	Papering Dr. Knight's house	48	61 74

STATEMENT II—Continued.

Date.	To whom paid	For what purpose.	No.	Amount.
1893				
July 21	G. H. Twiss	Stationery	49	$5 70
24	The Col. Gas Co.	170 bu. coke, sch. of mines,	50	10 75
	F. W. Prentiss, cash	Exp. chges, cert. of indebtedness	51	4 00
26	Cent. U. Telephone Co.	Rents, qr. end'g Aug. 30,'93	52	62 75
27	Alexis Cope	Salary for July, '93	53	166 67
	F. W. Prentiss	" "	54	8 33
	Cap. City Mach. works	Work on dynamo	55	53 68
28	Fred Charles	Plants, commencement	56	5 00
	Nitschke Bros.	Cards, etc	57	81 50
	F. B. Brewer	Serv. as watchman	58	45 00
July 29	Jas. Kelly	Work on camp in July, '93	59	40 00
	W. C. McCracken	Sal. as eng., July, 1893	60	100 00
	Chas. Low	Serv. as fireman, July	61	45 00
	W. C. Werner	Salary, supt. green-house, July, 1893	62	50 00
	F. P. Stump	Sal. supt. farm, 1893	63	60 00
31	Fred Neddermeyer	Music, commencement	64	30 00
	Columbus post-office	500 2-ct. stamps	65	10 00
Aug. 1	T. J. Godfrey	Exp. at meet. exec. com	66	12 30
2	W. C. Dill	9¼ days' work with team, at $3,	67	28 50
	John Thompson	13 days' work with team, at $3,	68	39 00
	C. Ashenhust	24 days' work on gds. at $1.50,	69	36 00
	E. G. Sheridan	25 days' work, at $1.50	70	37 50
	Stephen Ervin	24 " "	71	36 00
	Henry Redout	24 " "	72	36 75
	Wm. Garrett	25 " "	73	37 50
	John Thompson	1 d. hauling spec., Orton hall	74	3 00
	The Tracy-Wells Co.	Incidentals	75	1 02
	W. U. Telegraph Co.	Synchronized time service, 8 mo.	76	10 00
	Ira H. Miller	Services for June, etc	77	26 60
	Columbus Transfer Co.	Hauling 30 loads manure	78	30 00
	The M. C. Lilley Co.	Bunting flag	79	17 00
	Baker's Art Gallery	Crayon of Prof. Townshend	80	20 00
	Charles F. Scott	Trav. exp. from Pittsb'g, lecture	81	10 00
	C. W. Burkett	Janitor for June	82	5 25
	John Horton	Hauling lbr. for com. platform	83	1 50
	Dep. Agricult're O. S. U.	5 d. 2 men and team	84	14 75
	W. A. Kellerman	Telegram, commencement	85	35
	John R. Scott	Filling certificates	85	2 25
	Columbus Cabinet Co.	38½ doz. chairs for com	87	28 69
	Green, Joyce & Co.	Ribbon	88	17 44
	People's Store	2 chairs	89	5 00
	E. J. Aston	9 trays, ag. chem.	90	8 95
	"	Zinc, etc., gen. chem	91	75
	McClelland & Co.	Supplies, "	92	2 45
	McDonalds & Steube	" "	93	1 44
	Kauffman-Lattimer Co.	" "	94	99 25
	The Std. Paving Co.	Drains at Hayes hall	95	6 89
	Potts & McCoy	Copper, M. E. dept	96	6 80
	Stitt, Price & Co.	45 m. lime	97	3 90
	H. D. Turney & Co.	84 tons coal	98	171 08
	Tallmadge Hdw. Co.	Hardware	99	2 48
	Benj. Rushmer	Blacksmithing	100	2 50

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.	Lewis Fink	Papering	101	$7 00
Aug. 2	Murphy Iron Works	Repairs, etc	102	9 25
	Dept. Agr. O. S. U	Labor on roads and grounds	103	585 12
	Col. Edison El. Lt. Co	Wiring Orton hall	104	9 20
	H. Braun Sons & Co	Supplies, dept. anatomy	105	196 81
	Ed. J. Aston	Apparatus, "	106	9 00
	A. H. Smythe	" Anat. and phys	107	2 00
	Bausche-Lomb. Opt. Co.	" " "	108	154 58
	Kauffman-Lattimer Co.	" Mining dept.	109	62 73
	M. P. Nye	Work for "	110	12 75
	E. R. Graves & Co	Moulding "	111	2 39
	Hart & Crouse	Compound elbow	112	6 80
	Hine & Robertson	Straight Way valve	113	3 87
	Fairfield Co. Democrat	Advertising	114	5 00
	Spahr & Glenn	Printing	115	16 65
	Col. Exp; and Der Ohio Sontagsgast	Advertising	116	5 25
	College Transcript	Advertising	117	2 00
	A. N. Kellogg Newspaper Co	50 sets of plates	118	$66 66
	O. S. Journal	Advertising	119	7 50
	Hann & Adair	Printing	120	6 80
	Columbus Dispatch	Advertising	121	7 50
	Strobridge Litho. Co	Printing	122	141 50
	H. Braun, Sons & Co	Supplies dept. agr.	123	19 10
	Wm. Whyte	Est. No. 4, stone carving on Orton hall	124	475 06
	W. S. Wiggans	Steel stamp and burning brand	125	3 80
	A. W. Livingston's Sons	Seed, dep. agr.	126	32 38
	Jacobs Bros	Supplies, dep. agr.	127	4 06
	The Kilbourne, Jones & Co	Hardware, dep. agr.	128	10 50
	Blackwood, Green & Co	Hardware, dep. agr	129	43 27
	Benj. Rushmer	Blacksmithing	130	10 40
	Wm. Burdell, Jr	Saddlery sup. dep. agr.	131	50 00
	Irvin Bros	Supplies, dep. agr.	132	4 76
	Col. post-office	400 1-ct. wrappers	133	4 40
	J. H. Farver	Apparatus, dep. agr.	134	2 00
	Potts & McCoy	Pipe and fitting for engine elec. power plant	135	51 55
	Nitschke Bros	Printing	136	61 25
	The Ruggles-Gale Co	"	137	14 75
	Hann & Adair	"	138	25 20
	The Werner Co	Lith. bonds	139	32 50
	American Exp. Co	Expressage	140	40 80
	R. L. Polk & Co	1 directory	141	5 00
	Dunn, Taft & Co	62 yds. cheese cloth	142	3 10
	Z. L. White & Co	5 yds. crash	143	42
	Col. Transfer Co	Carriage, commencement	144	4 00
	Tallmadge H'dw'e Co	Hardware	145	1 30
	E. E. Bogue	66¼ hours' labor	146	9 95
	C. W. Burkett	Janitor work in July, 1893	147	5 60
	Frank Homan	7 days' cleaning house	148	10 50
	A. S. Peale	" "	149	10 50
	Karl Swartzel	4 days' cleaning house	150	6 00
	Monypeny, Ham. & Co.	Supplies cleaning house	151	3 80
	D. J. Brumley	25 hours' work	152	3 75
	Chas. H. Woodruff	88 hours' carpenter work	153	24 44
	Yost & Packard	Arch. fees Orton hall, $78.26, Hayes hall, $36.38	154	114 64

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
Aug. 2	Cent. Electric Co...	Electric supplies, Orton Hall..	155	$22 25
	Diamond Plate Glass Co.....	Glass for Orton Hall.....	156	75 94
	E. G. Swartzell.....	12 days' labor.....	157	18 00
	A. W. Livingston's Sons	Seed for dept. agr.....	158	7 35
	Bausch-Lomb Opt. Co...	Apparatus, dep. bot.....	159	12 60
	Queen & Co.....	" "	160	2 79
	The Cherrington Pt. Co	Labels and blanks dep. bot.....	161	11 50
	Clara E. Cummings.....	Supplies, dep. bot.....	162	3 86
	E. B. Adams & Co.....	Lumber.....	163	33 01
	The Col. Sewer Pipe Co	1000 fire brick.....	164	20 00
	Laclede F. B. Mfg. Co....	2 retorts and fittings.....	165	122 00
	Blackwood, Green & Co	Hardware	166	1 25
	Chas. F. Woodruff.....	Carpenter work.....	167	33 04
	H. Braun, Sons & Co....	Paint	168	8 50
	Benj. Rushmer.....	Blacksmithing.....	169	2 50
	C. T. Hirtler.....	Brick work, placing retorts...	170	45 60
	The Talmadge Hdwe Co	Hardware	171	1 65
	Potts & McCoy.....	Pipe and fittings	172	142 62
	H. D. Turney & Co.....	44 tons coal	173	94 80
	Col. & Hock. Coal Co...	131 tons coal.....	174	196 27
	Wash. Townsend.....	6 days' clean'g b'l'd'g @ $1.50.	175	9 00
	Otto Harrassowitz.....	Supplies, dep. of Greek.....	176	2 72
Aug. 5	W. S. Turner	Serv. as supt. greenhouse, July '93.....	177	$60 00
7	Col. post-office.....	500 4c., 500 2c., 500 1c. wrap'rs	178	35 50
10	D. J. Brumley.....	17 days' watchman, July.....	179	25 50
	Warner & Swasey.....	4 10-hand lathes, Hayes hall...	180	240 00
	Engelke & Bigelow.....	Freight and hauling, electric power plant.....	181	66 08
	"	F'ght and cartg. per bills.....	182	54 22
	"	Haul'g stone from Orton hall.	183	40 50
12	Edw. M. Bloom.....	1-10 salary as asst. min. dep...	184	15 00
	Thos. B. Hunt.....	Painting dormitory roof.....	185	44 32
26	W. C. McCracken.....	Salary as engineer, Aug., '93...	186	100 00
	Alexis Cope.....	" secretary, " ...	187	166 66
	Chas. Low	" fireman, " ...	188	45 00
	Wash. Townsend.....	Serv. as janitor, " ...	189	40 00
	Fred B. Brewer.....	" watchman " ...	190	45 00
	W. C. Werner	Salary as asst. bot. and supt. greenhouse; August, 1893...	191	50 00
	F. P. Stump.....	Salary for August, 1893.....	192	60 00
	Ohio Agr. Exp. Sta.....	Sum agreed in settlement of acct. for improvements.....	193	5,000 00
	John T. Mack	Expenses at meetings July 12 and September 1, 1893.....	194	17 75
	W. I. Chamberlain.....	Exp. at meeting this day.....	195	7 65
	T. J. Godfrey	" "	196	9 15
	Chas. W. Weick	Services from August 10 to September 1, 1893.....	197	60 00
	John Brown.....	219 hrs. grading, Aug., '93.....	198	32 85
	Stephen Erwin.....	254 " "	199	38 10
	Henry Redout.....	275 " at 15c.....	200	41 25
	John Thompson.....	239 " man & team	201	82 45
	A. G. Sheridan	259 " at 15c	202	38 85
	Cunn'gham-Ashenhurst	259 " "	203	38 85
	Wm. Garret.....	264 "	204	39 60
Sept. 2	John Devine.....	10½ days' painting at $2.50.....	205	26 25

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893				
Sept. 2	Thos. B. Hunt	Repairing chimneys, etc	206	$43 63
	"	Sett'g anvil blocks, Hayes hall	207	39 70
	E. B. Adams	Lumber	208	56 01
	Allen & Clark	Repairing plastering, etc	219	401 75
	W. J. McClain	Pt. estimate No. 17, Orton hall	210	3,102 19
	C. T. Hirtler	Brick work, engine bed, power plant	211	46 42
4	The Lodge & D. Mach. & Tool Co	4 14x6 eng. lathes, Hayes hall	212	725 00
4	J. A. Fay & Egan Co	Machinery, Hayes hall	213	375 00
	Wm. Standley	Helper to engineer, 23 days at $1.50	214	34 50
	Karl Swartzel	Clean'g house, 11 days at $1.50	215	16 50
	The Tallmadge Hdw. Co.	Hardware, chem. lab	216	47 32
	John W. Reams	123 hrs. carpenter work	217	35 00
	Horace Judd	74½ " "	218	20 55
	Thos. D. Ray	108 " " at 27½c	219	30 12
	Geo. T. Trowbridge	159 " " "	220	44 20
	Chas. H. Woodruff	Carpenter work	221	60 42
	Cent. Ohio Paper Co	10 sq. 3-ply R. roofing	222	22 50
	Lewis Fink	Paper ring and painting	223	137 61
	Slade & Kelton	Lumber for repairs	224	140 61
	Coe & Zinn	Lumber for grape frame	225	2 54
	The Fish Stone Co	Repairing stone steps	226	103 01
	Potts & McCoy	Clip for old pipe machine	227	4 56
	C. T. Webster	Rep. Dr. Townshend's house	228	2 93
	N. S. Townshend	Repairing pump	229	2 10
	Blackwood, Green & Co.	" roofing, etc	230	96 49
26	Quaker City Chair Co	12 dozen chairs	231	126 00
4	J. H. Farver	Repairs musical instrument	232	2 25
	H. Braun, Sons & Co	Paints and oils for repairs	233	21 18
	Col. Sewer Pipe Co	Sewer pipe	234	6 31
	Patrick Mullay	161 hrs. cleaning b'ld'g at 15c	235	24 00
5	James Kelly	Work on lawn Aug., 1893	236	$40 00
6	Gustav E. Stechert	Books for library	237	360 06
	Am. Magazine Ex	4 vols. Review of Reviews	238	10 70
	Spahr & Glenn	Cards for hort. dept	239	11 75
	F. A. Peckham	6 vols. London Engineering	240	45 00
	Col. Transfer Co	32 loads manure, hort. dept	241	32 00
	Kimball & Mathews	Supplies vet dept	242	4 80
	Arthur L. Williston	Expenses equip. Hayes Hall	243	22 25
	Engelke & Bigelow	Hauling, Hayes Hall	244	67 63
7	E. E. Bogue	115½ h. work green house and campus @ 15c	245	17 30
	A. S. Peale	10 d. cleaning bldg. @ $1.50	246	15 00
6	Yost & Packard	Serv. as architects, Orton Hall	247	138 86
	C. H. Woodruff	3 hours' carpenter work	248	83
	The Tallmadge Hdw. Co	Hdw. Orton Hall, elect light	249	1 22
	Engelke & Bigelow	Hauling for elect. power plant	250	110 93
	Col. Sewer Pipe Co	Sewer pipe	251	8 55
7	C. H. Woodruff	37 hours' carpenter work	252	10 28
6	Geo. Trowbridge	12 h. carp. work, elect. P. plant	253	3 33
	Potts & McCoy	Engine fitting	254	87 75
	Cherrington P. & E. Co	2 stamps	255	50
	Hann & Adair	Blanks and circulars, law sch	256	190 20
	Hann & Adair	Printing blanks	257	4 15
	N tl Stockman&Farmer	Advertising	258	22 68
	Engelke & Bigelow	Hauling	259	10 65
	" "	" apparatus	260	18 74
	Cent. Press Assn	Advertising	261	8 50
	Inter-stateCollegiateRec	"	262	2 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
Sept. 6	Strobridge Litho. Co.....	1000 No. 9 envelopes.....	263	$9 50
	Collector Pub. Co	Advertising for August, 1893..	264	5 00
	The Graphic Co.....	" in Graphic.....	265	140 00
	Laning Printing Co.....	10,000 catalogues	266	490 00
	W. H. Kellerman.....	Supplies botanical dept.....	267	38 06
	The Talmadge Hdw. Co.	1 doz. drawer locks, dept. of drawing.....	268	3 50
	Col. post-office.....	Stamps.....	269	12 72
	Geisen Mfg. Co	1 Peerless thresher, dept. of agriculture	270	204 80
	Davies Turner & Co.....	Freight on apparatus, dept. of geology	271	6 19
	Bausch & L. Optical Co.	Apparatus, dept. of botany.....	272	30 59
	The Westinghouse Elec. & Mfg. Co.....	2 No. 12 converters, physics laboratory.....	273	100 00
	H. D. Turney & Co..... .	21.12 tons gas coal @ $2.80.....	274	60 48
	Columbus post-office.....	500 one-cent stamps.....	275	5 00
	McClelland & Co.....	Stationery	276	1 85
7	Z. L. White & Co.....	Cambric, etc., general supplies	277	3 52
	D. J. Brumley.....	5 hours' work, commencement	278	75
6	Adams Express Co.....	Freight, etc.....	279	1 95
	W. U. Telegraph Co.....	Messages.....	280	5 10
7	W. H. Scott.....	Traveling exp., postage, etc....	281	25 95
	Eliza Markert	Cleaning rooms, vet. hosp.....	282	8 00
	Chas. Herbert.....	120 h. cleaning bldg. @ 15c.....	283	18 00
	R. D. McCarter.....	120 h. " "	284	18 00
	J. W. Walker.....	5½ d. " "	285	8 25
	Frank Homan	11½ d. " @ $1.50..	286	17 25
	Eva Knopf.....	Work in library June, Jul. Aug.	287	12 40
8	Col. post-office.....	300 1c., 500 2c., 500 5c. stamps..	288	38 00
	W. S. Turner.....	Salary as supt. gard. August...	289	60 00
9	Col. post-office.....	500 2-cent stamps.....	290	10 00
22	D. M. Massie.....	Ex. att meet'g of board July 12	291	6 90
25	W. J. McClain.....	On acct. Orton Hall.....	292	1,055 77
	L. B. Wing.....	Exp. att. meet'g 8–23 to 9–23 '93	293	9 55
26	David C. Meehan.....	62½ yds. linoleum and laying same	294	62 23
26	Frank Stratton.....	Est. No. 8 steam h't'g plant....	295	$53 31
	Stitt, Price & Co	30 m. lime.....	296	2 70
	Kimball & Mathews.....	Photo. material, C. E. dep't ...	297	5 50
	Barrow & Hoster	2 picture frames, dep Greek..	298	5 75
	R. F. Lang.....	Cus. House charges and freig't	299	7 04
	R. D. McCarter.....	Electrical work, Orton Hall...	300	17 25
	Diamond Plate Glass Co.	Freight on patterns.....	301	50
	George Cutter.....	Apparatus, elec. power plant...	302	74 08
	Cent. Electric Co.....	" "	303	19 19
	The Pneumatic Watch C. Co.....	Six new watch stations.....	304	16 00
	Blackwood, Green & Co.	H'dw'e repairs, dorm.....	305	69 84
	Col. Transfer Co.....	Hauling sup., dep. hort.....	306	31 00
	Corning & Co.....	4 bbls. alcohol.....	307	102 56
	Karb & Shaefer.....	2 bbls. oil.....	308	23 49
	Orr & McIntire.....	Advertising	309	2 00
	Paul C. Carty.....	"	310	10 00
	Hann & Adair.....	Advertising and printing.....	311	143 57
	Buffalo Forge Co.....	Apparatus, Hayes Hall.....	312	1,029 00
	The G. B. Schulte, Son & Co.....	Supplies, "	313	294 74
	Thos B. Hunt	Setting anvils, etc. "	314	98 58
	E. A. Kinsey & Co.....	Supplies, "	315	801 85

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
Sept. 26	H. B. Smith Mach. Co...	Supplies, Hayes Hall	316	$39 00
	The Fox Mach. Co.....	" "	317	30 00
	Orr, Brown & Price.....	" "	318	1 25
	Tallmadge H'dw'e Co...	Hardware, "	319	9 64
	Dundon & Bergin	Lumber, "	320	89 37
	Slade & Kelton.....	" "	321	6 60
	C. A. Burkett	Labor, "	322	12 00
	A. L. Williston	Erecting shafting "	323	25 00
	George Young.....	" "	324	13 00
	Wm. Herron.....	" "	325	26 50
	The Pickering Hdwe Co.	H'dw'e, app. &c. "	326	575 97
	Alexis Cope.....	1 bottle ink, etc	327	1 00
	Hobart Beattie.....	Quartermaster cur. term.....	328	5 00
	J. H. Geisinger	Cleaning books.....	329	2 55
	H. W. Geisinger.....	"	330	2 55
	Ira H. Miller.....	Clerk, August, 1893.....	331	25 00
	The Tracy-Wells Co.....	Supplies	332	9 89
	Am. Dist. Teleg. Co.....	Rent, fire alarm boxes.....	333	28 00
	H. Braun, Sons & Co...	Supplies	334	2 15
	D. J. Brumley.....	Watchman, to Sept. 13.....	335	64 50
	Adams Express Co.....	Expressage.....	336	4 85
	U. S. Express Co.....	"	337	6 15
	Wells-Fargo Ex. Co	"	338	4 40
30	W. C. McCracken.....	Salary as eng., Sept. 1893.....	339	100 00
	Charles Low.....	Serv. as fireman, Sept. 1893...	340	45 00
	A. L. Williston.....	1-10 salary, Sept. inst., 1893.....	341	200 00
29	Edward Orton.....	" "	342	225 00
	Florence Bascom.....	" "	343	80 00
30	W. H. Scott.....	" "	344	300 00
	Sidney A. Norton.....	" "	345	225 00
	S. W. Robinson.....	" "	346	225 00
	N. W. Lord.....	" "	347	200 00
	Sam'l C. Derby.....	" "	348	225 00
	W. R. Lazenby.....	" "	349	225 00
	J. R. Smith.....	" "	350	225 00
	H. A. Weber.....	" "	351	225 00
	B. F. Thomas.....	" "	352	225 00
	Geo. W. Knight.....	" "	353	225 00
	H. J. Detmers	" "	354	$225 00
	R. D. Bohannon.....	" "	355	225 00
	D. S. Kellicott.....	" "	356	225 00
	C. N. Brown.....	" "	357	225 00
	Ernst A. Eggers.....	" "	358	225 00
	A. M. Bleile.....	" "	359	225 00
	W. A. Kellerman.....	" "	360	225 00
	Thos. F. Hunt,.....	" "	361	225 00
	Geo. B. Kauffman.....	" "	362	150 00
	Jas. Chalmers.....	" "	363	200 00
	B. L. Bowen.....	" "	364	180 00
	Jos. V. Denney.....	" "	365	180 00
	C. B. Morrey.....	" "	366	70 00
	Geo. M. McCoard.....	" "	367	160 00
	W. F. Hunter.....	" "	368	60 00
	H. L. Wilgus.....	" "	369	30 00
	F. W. Sperr.....	" "	370	200 00
	Jos. N. Bradford.....	" "	371	160 00
	Geo. P. Coler.....	" "	372	180 00
	Frank C. Caldwell.....	" "	373	120 00
	Olive B. Jones.....	" "	374	80 00
	C. W. Mesloh	" "	375	100 00
	J. R. Taylor.....	" "	376	70 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
Sept. 30	Chas. W. Weick	1-10 salary, Sept. inst, 1893	377	$80 00
	C. L. Arnold	" "	378	70 00
	Clair A. Dye	" "	379	60 00
	L. M. Bloomfield	" "	380	70 00
	W. C. Werner	" "	381	60 00
	Frank J. Combs	" "	382	80 00
	E. A. Kemmler	" "	383	120 00
	W. H. Siebert	" "	384	90 00
	Henry C. Lord	" "	385	90 00
	James E. Boyd	" "	386	80 00
	Wm. McPherson	" "	387	150 00
	Wallace S. Elden	" "	388	80 00
	E. A. Hitchcock	" "	389	120 00
	F. P. Stump	Salary for Sept. 1894	390	60 00
	W. S. Turner	" "	391	60 00
	F. B. Brewer	" "	392	45 00
	Dennis Kelly	Labor on lawn, Sept.	393	40 00
	Wm. A. Knight	1-10 salary, Sept. inst., 1893	394	80 00
	David S. White	" "	395	60 00
	Col. Water Works	Meter, Orton Hall	396	41 00
	Wash. Townsend	Services as janitor, Sept., 1893	397	40 00
	Ernst Bradford	1-10 salary, Sept., 1893	398	60 00
Oct. 3	Edward Whalen	Services as errand boy to Oct.	399	10 00
	T. J. Godfrey	Exp., committee meeting	400	10 35
4	D. J. Brumley	Labor as janitor	401	4 50
	E. E. Bogue	Labor	402	32 35
	K. D. Swartzel	Visitors' guide, 39 hours	403	5 85
	John Thompson	Grading	404	60 05
	C. Ashenhurst	Labor on roads and grounds	405	38 40
	E. G. Sheridan	" "	406	38 40
	E. N. Leffler	Labor	407	1 23
	C. M. Bayham	"	408	1 23
	Franklin Fuel Co	Screenings and crushed stone.	409	970 57
	E. G. Swartzel	Guide, State Fair and labor, Orton Hall, 4 days	410	21 00
	Ord Myers	Janitor work	411	4 50
	Thos. C. Southard	" work	412	9 00
	A. D. Hamilton	Janitor work	413	4 65
	Henry Redout	Grading roads and grounds	414	30 30
	John Brown	Labor "	415	38 40
	A. W. Livingston's Sons	Seed "	416	5 15
	William Garrett	Labor "	417	18 90
	Dept. Agriculture	On acc't "	418	183 25
	Ira H. Miller	Services, Sept.	419	26 20
	A. S. Peale	Labor	420	6 00
	F. Albrittain	"	421	7 50
	Col. Sewer Pipe Co.	Pipe, roads and grounds	422	6 94
	Wm. Standley	Labor as fireman	423	39 00
	Frank Homan	" janitor	424	34 05
	M. J. Walker	" "	425	1 50
	Geo. T. Trowbridge	Work	426	49 98
	Engelke & Bigelow	Hauling	427	32 41
	"	" Hayes hall	428	175 15
	"	" power plant	429	40 16
	Geo. Trowbridge	Apparatus, dept. zoo	430	10 56
	"	Labor, Hayes hall	431	1 67
	Chas. J. Slyh	Cleaning vaults	432	20 00
	J. C. Early	Labor as janitor	433	6 75
	Juan M. Zeigler	" "	434	6 00
	Chos. H. Wetherell	" "	435	2 77
	W. B. Evans	" "	436	5 40

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
Oct. 4	C. W. Burkett	Labor as janitor	437	$29 70
	W. H. Scott	Extra services of clerk.	438	46 75
	Slade & Kelton	Saw dust	439	1 00
	W. U. Telegraph Co	Messages	440	5 29
	Standard Oil Co	Engine oil	441	3 85
	David C. Meehan	Carpet, law school	442	30 00
	Stone & Schumaker	3 keys	443	75
	Am. Express Co	Expressage	444	24 20
	Richmond & Bachus Co.	Class Registers	445	25 92
	Herman Haerlein	Plan of grounds and labor	446	351 00
	Wm. Whyte	Estimate No. 5, Orton hall	447	451 00
	U. D. Beard & Bro	Glass	448	54 20
	Thos. G. Neski	Plumbing	449	14 50
	Thos. B Hunt	Work, veterinary hospital	450	171 50
	E. A. Hitchcock	Labor	451	31 00
	Col. post-office	Cash paid for stamps	452	4 50
	Horace Judd	Carpenter work	453	9 04
	Potts & McCoy	Pipe and fitting	454	7 20
	Tobias Ruhwedel	Plumbing	455	9 75
	T. E. French	1-10 salary, Sept. inst., '93	456	30 00
	J. S. Stanbrook	Labor, test lab	457	31 50
	Thos M. Boude	" "	458	6 00
	E. R. Roberts & Co	Indicator test lab	459	49 60
	Pulsomet'r Steam Pump Co	Pump, test lab	460	50 60
	Kelton & Moore	Lumber "	461	38 00
	Neptune Meter Co	2 meters "	462	8 00
	Thompson & Bushnell	1 indicator "	463	40 00
	Col Bolt Works	Bolts, etc., "	464	1 84
	Kilbourne, Jones & Co.	Hardware "	465	5 12
	Rider Engine Co	2 engines "	466	315 00
	Talmadge Hdw. Co	Hardware "	467	46
	Barrow & Hosler	Frames "	468	4 50
	C. M. Withoft	Return chem. lab. fee	469	8 00
	Stitt, Price & Co	Cement, test lab	470	11 36
	Clara Byers	Work in library	471	13 35
	John W. Reams	Work, testing lab	472	$3 89
	John W. Reams	Carpenter work	473	37 22
	Chas. H. Woodruff	Carpenter work	474	30 27
	Thos. B. Hunt	Work, Hayes hall	475	3 75
	W. H. Hartsough	Typewriting, dept. agr	476	4 00
	C. W. Burkett	Labor, dept. agr	477	8 40
	W. R. Beattie	" on grounds	478	55 50
	Green, Joyce & Co	Supplies, dept. agr	479	4 60
	Thos. D. Ray	Carpenter work	480	32 74
	Tallmadge Hardware Co	Hardware	481	22 43
	Chas. Parkison	Sand, etc.	482	35 70
	Slade & Kelton	Lumber	483	36 00
	E. B. Adams & Co	"	484	18 92
	Blackwood, Green & Co	Hardware, etc	485	39 72
	G. D. Freeman Mfg. Co.	Cases, Orton hall	486	1,150 00
	H. Braun, Sons & Co	Paints, etc.	487	8 25
	Lewis Fink	Wall paper	488	24 06
	S. W. Robinson	Steam gauge	489	17 28
	Sidney A. Norton	Supplies, gen. chem	490	21 08
	Slade & Kelton	Lumber	491	18 23
	Payne-McDonald Hardware Co	Hardware	492	29 35
	Jones, Fox & Heyl	Tables, etc	493	65 00
	W. H. Ferree	Hauling	494	4 00
	Tallmadge Hardware Co	Supplies, dept. drawing	495	2 40

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
Oct. 4	Kimball & Matthews.....	Supplies, dept. drawing.....	496	$64 70
	Columbus Transfer Co..	Freight and hauling.....	497	30 00
	Deere & Co.....	Apparatus, dep. hort.....	498	20 93
	J. A. McGrew	Wiring, Orton hall	499	18 00
	Henry H. Klott.....	Repairing insts., vet. dep	500	2 50
	Columbus Cabinet Co...	Mattress, "	501	5 50
	Slade & Kelton.....	Lumber, geo. dep.....	502	1 24
	John W. Reams.....	Labor, "	503	8 75
	Chas. H. Woodruff.....	" "	504	8 30
	Thos. D. Ray	" "	505	5 27
	W. H. Dillman, Agt.....	Binder, etc.	506	154 75
5	F. W. Prentiss	Salary, Aug. and Sept.,'93.....	507	16 67
	Alexis Cope.....	" for Sept. '93.....	508	166 67
4	H. Braun, Sons & Co.....	Supplies, bot. dept	509	4 05
28	T. E. French	1-10 salary, Oct. inst., '93.....	510	30 00
4	Slade & Kelton.....	Lumber, farm app.....	511	179 33
	Keystone Mfg. Co.....	Hay loader.....	512	60 00
	Jones, Fox & Heyl.....	Lumber, dept. bot.....	513	69 94
	Hasbrook, Orr & Byers..	Tumblers, "	514	1 20
	Ed. C. Brown, Elec. Co..	Hose, app., "	515	3 00
	Brust & Brauch	Engine bed	516	173 10
	Potts & McCoy	Supplies for engine.....	517	6 32
	Geo. H. Calkins.....	Electric work.....	518	10 50
	Mark Livingston	" work	519	3 90
	Slade & Kelton.....	Lumber.....	520	3 36
	Hoppes Mfg. Co	Feed for water heater	521	175 00
	F. C. Caldwell	Supplies, Elec. P. Plant.....	522	4 84
	Houston Jones.....	Electrical work.....	523	13 50
	W. C. Cole.....	"	524	14 10
	Chas. T. Herbert.....	Janitor work	525	17 25
	Buckeye Engine Co.....	Buckeye engine	526	831 59
	Slade & Kelton.....	Lumber for Hayes hall	527	21 30
	Thos. D. Ray	Work "	528	7 77
	Chas. H. Woodruff.....	" "	529	1 25
	John W. Reams.....	" "	530	3 33
	Tallmadge Hdw. Co.....	Hdwe. " Hayes hall.....	531	3 19
	Iva Green.....	Cinders "	532	6 00
	Potts & McCoy.....	Hdwe. "	533	18 33
	Blackwood, Green & Co.	" "	534	81
	John L. Trauger.....	Printing "	535	4 50
	Patrick Mullay	" and adv.	536	45 00
	Mast, Crowell & Kirkpatrick.....	Advertising	537	31 50
	The Terry Eng. Co.....	" Printing	538	110 30
	Lord & Thomas.....	"	539	219 93
	A. N. Kellogg N. P. Co..	"	540	66 66
	W. A. Kellerman	Supplies, bot. dept.....	541	26 89
	Nitschke Bros.....	Printing "	542	21 60
	McCelland & Co.....	Supplies "	543	4 20
	H. Braun, Sons & Co.....	" "	544	4 07
	F. C. Audibert	Specimens dep. zoo.....	545	5 25
	D. S. Kellicott.....	Supplies "	546	8 00
	Taldmadge Hdwe. Co...	" "	547	25 23
	C. H. Woodruff.....	Work "	548	10 86
	Thos. D. Ray	" "	549	13 88
	John W. Reams	" dept. zoo.....	550	9 30
	Slade & Kelton.....	Lumber "	551	42 11
7	Herbert Scott.....	Services as clerk Sept. sal.....	552	50 00
13	Frank B. Bryan.....	Painting, acct. Lib. Bureau... ..	553	75 00
28	F. W. Prentiss	Salary for Oct., 1893.....	554	8 33
	W. H. Scott	1-10 sal., Oct. inst., 1893.....	555	300 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893				
Oct. 28	Ernst Eggers	1-10 sal., Oct. inst., 1893	556	$225 00
	Edward Orton	" "	557	225 00
	Sidney A. Norton	" "	558	225 00
	S. W. Robinson	" "	559	225 00
	S. C. Derby	" "	560	225 00
	W. R. Lazenby	" "	561	225 00
	J. R. Smith	" "	562	225 00
	H. A. Weber	" "	563	225 00
	B. F. Thomas	" "	564	225 00
	Geo. W. Knight	" "	565	225 00
	H. J. Detmers	" "	566	225 00
	R. D. Bohannan	" "	567	225 00
	D. S. Kellicott	" "	568	225 00
	C. N. Brown	" "	569	225 00
	A. M. Bleile	" "	570	225 00
	W. A. Kellerman	" "	571	225 00
	Thos. F. Hunt	" "	572	225 00
	N. W. Lord	" "	573	200 00
	James Chalmers	" "	574	200 00
	A. N. Williston	" "	575	200 00
	Geo. P. Coler	" "	576	180 00
	Jos. V. Denney	" "	577	180 00
	B. L. Bowen	" "	578	180 00
	Geo. W. McCoard	" "	579	160 00
	J. N. Bradford	" "	580	160 00
	Geo. B. Kauffman	" "	581	150 00
	Wm. McPherson	" "	582	150 00
	E. A. Hitchcock	" "	583	120 00
	E. A. Kemmler	" "	584	120 00
	F. C. Caldwell	" "	585	120 00
	C. W. Mesloh	" "	586	100 00
	W. H. Siebert	" "	587	90 00
	H. C. Lord	" "	588	90 00
	W. A. Knight	" "	589	80 00
	W. S. Elden	" "	590	80 00
	F. J. Combs	" "	591	80 00
	Jas. E. Boyd	" "	592	80 00
	Chas. W. Weick	" "	593	80 00
	Olive B. Jones	" "	594	80 00
	Florence Bascom	" "	595	80 00
	L. M. Bloomfield	" "	596	70 00
	C. L. Arnold	" "	597	70 00
	J. R. Taylor	" "	598	70 00
	C. B. Morrey	" "	599	70 00
	Ernest Bradford	" "	600	60 00
	D. S. White	" "	601	60 00
	Clair A. Dye	" "	602	60 00
	Wm. F. Hunter	" "	603	60 00
	Herbert Scott	" "	604	50 00
	H. L. Wilgus	" "	605	30 00
	Alexis Cope	Sal. for Oct. inst., 1894	606	166 67
	W. C. McCracken	" "	607	100 00
	F. P. Stump	" "	608	60 00
	W. S. Turner	" "	609	60 00
	Chas. Low	" "	610	45 00
	F. B. Brewer	" "	611	45 00
	James Kelley	" "	612	40 00
	Wash. Townsend	" "	613	40 00
	Edward Whalen	" "	614	15 00
24	L. H. McFadden	Dues A. C. Ass'n	615	5 00
28	F. W. Sperr	1-10 sal., Oct. inst., 1893	616	200 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
Oct. 28	C. W. Foulk	2-10 sal., Oct. & Sept. inst., '93..	617	$30 00
	W. C. Werner	1-10 sal. Oct. inst., 1893	618	60 00
	J. H. McGregor	Sal. Oct. and Sept., 1893	619	30 00
31	Col. Post-office	Postal cards	620	1 00
Nov. 1	Ross J. Alexander	Expense meeting	621	14 00
	T. J. Godfrey	" "	622	13 25
	W. I. Chamberlain	" "	623	17 30
	John T. Mack	" "	624	11 95
	McDonald & Grant	Band instruments	625	192 00
	Thos. F. Hunt	Expense visiting schools	626	8 50
	Frank Homan	Janitor, Hayes hall	627	8 70
	J. M. Zeigler	" " "	628	9 00
	Wm. Standley	Fireman	629	45 00
	Frank Albrittain	"	630	43 50
	Chas. Wetherell	"	631	2 40
	R. R. Miller	Janitor, Hayes hall	632	6 15
	Louise Herrick	Work, library	633	20 00
	E. W. Harvey	" "	634	6 30
	J. A. Geisinger	" "	635	3 00
	R. B. Taylor	" "	636	2 55
	H. O. Williams	" "	637	15 30
	Alex. Daubert	Janitor, law school	638	5 00
	D. J. Brumley	"	639	9 45
	Col. Rubber & Belt Co.	Rubber mats	640	17 85
	Adams Express Co.	Express	641	3 05
	People's Store	Chairs and desks	642	56 70
	Alex. Daubert	Janitor, law school	643	2 50
	U. S. Express Co.	Express	644	3 55
	C. U. Telephone Co	Service	645	62 50
	Dunn, Taft & Co	Ribbon	646	2 25
	Postal Tel. Cable Co.	Messages	647	2 24
	S. K. Carson	Services as usher, 8 days	648	7 50
Nov. 1	T. Ewing Miller	Rent of office	649	125 00
	Hugo Diemer	Typewriting	650	1 50
	Geo. W. Knight	Exp. Cambridge schools	651	8 16
	Eliza Markert	Cleaning Orton hall	652	8 12
	K. F. Postle	Labor	653	5 10
	A. S. Pearl	" etc	654	22 95
	G. S. Marshall	Advertising	655	2 50
	W. R. Lazenby	Expense to Chicago	656	18 25
	H. J. Detmers	" "	657	20 00
	C. W. Burkett	Janitor Hayes hall	658	10 00
	H. A. Weber	Expenses to Chicago	659	20 00
	Mrs. Dudley	Labor, cleaning buildings	660	7 48
	M. Milliman	" " "	661	1 65
	Richard West	" " "	662	22 20
	T. Southard	" " "	663	8 00
	A. D. Hamilton	" " "	664	8 00
	Ord Myers	" " "	665	9 00
	Homer Patch	Cleaning Orton hall	666	1 50
	McClelland & Co.	General supplies	667	5 07
	E. S. Greeley & Co.	Gong	668	38 40
	John Brown	Labor, rds. and gds	669	36 75
	E. G. Sheridan	" "	670	2 25
	C. E. Bogue	" "	671	17 75
	Dun, Perley Co.	Tile, rds. and gds	672	195 00
	C. Ashenhurst	Labor, "	673	2 25
	John Thompson	" "	674	13 80
	W. S. Postle	Tile, "	675	15 30
	Wm. Whyte	Est. No. 6, Orton hall	676	133 00
	Fish Press Brick Co.	Brick	677	48 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893				
Nov. 1	S. W. Robinson	Cash advanced for labor	678	$27 00
	W. A. Loos	Labor, mech. lab	679	40 50
	Cap. City Mach. Co	Repairs, test lab	680	15 45
	E. A. Hitchcock	Cash advanced for labor	681	20 30
	Columbus Bolt Works	Supplies, test lab	682	4 19
	S. W. Robinson	" "	683	12 67
	Columbus Supply Co	" "	684	10 75
	D. Spencer & Sons	Ceiling, M. E. room	685	20 00
	Slade & Kelton	Lumber, test lab	686	3 00
	Geo. Young	Labor, Hayes hall	687	39 00
	A. L. Williston	" "	688	7 85
	Chas. A. Klie	Wash stand, etc., test lab	689	69 64
	Crosby Steam Gauge Co.	Gauge, etc	690	49 77
	Sherwood Mfg. Co	Injectors	691	6 00
	The Hay & D. Mfg. Co.	"	692	6 25
	Irvin Van Wie	L. H. horse pump	693	90 50
	Cap. City Mach. Wks	Shafting, etc., Hayes hall	694	141 75
	Chas. M. Woodruff	Work, "	695	1 81
	Elliott & Maclean	Benches, "	696	502 00
	Fish Press Brick Co	Brick, "	697	96 00
	Lewis Fink	Painting, "	698	115 61
	Chas. Parkison	Sand	699	21 00
	The Washburn Shops	Lathes for Hayes hall	700	1,200 00
	Pickering Hdw. Co	Tools, "	701	15 67
	The Fitchburg Mach. Works	Engine lathe, Hayes hall	702	325 00
	E. A. Kinsey & Co	Lathes and equipm't, "	703	864 09
	Stitt, Price & Co	Lime	704	4 95
	E. A. Cole & Co	Coal	705	136 26
	J. H. Freese	Labor, elec. wiring	706	18 38
	D. C. Thomas	" "	707	4 50
	R. F. Fletcher	" "	708	$32 20
	S. K. Carson	" "	709	13 20
	Col. Edison Elec. Light Co	Wire	710	17 57
	Chas. H. Woodruff	Labor, carp. work	711	6 67
	P. H. Hubbard	" elec. wiring	712	21 30
	R. R. Miller	" "	713	12 00
	E. B. Adams & Co	Lumber	714	10 00
	Slade & Kelton	"	715	5 75
	Cent. Electric Co	Wire	716	33 30
	Std. Underground Cable Co	Cable wire for circuit	717	403 00
	C. W. Burkett	Labor, janitor work	718	7 13
	Kimball & Mathews	Photo apparatus	719	18 00
	John W. Hill	Slides, dep. agr	720	8 50
	The Kauffman L. Co	Chemicals, dep. agr.	721	5 25
	Horace Judd	Labor, dep. agr	722	5 56
	J. W. Reams	"	723	27 78
	Chas. W. Woodruff	"	724	1 39
	Thos. D. Ray	"	725	6 22
	Cleve. Linseed Oil Co	4000 bu. coarse linseed meal	726	45 69
	Hardesty Bros	Bran and middlings	727	93 00
	Smith Bros	Netting, dep. agr	728	11 75
	E. B. Adams & Co	Lumber, "	729	118 21
	Col. Sewer Pipe Co	Pipe, dep. physics	730	9 51
	W. U. Telegraph Co	Time, "	731	5 00
	R. R. Miller	Labor, "	732	2 40
	Chas. H Woodruff	" "	733	2 83
	Nitschke Bros	Letterheads, dep. physics	734	2 25
	Cent. Electric Co	Supplies "	735	46 67

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
Nov. 1	Hann & Adair	Postal cards and printing	736	$6 67
	Edward Orton	Expenses, dep. geology	737	22 64
	The Ruggles-Gale Co	Printing, law school	738	2 50
	American Grange Bul	Adv., school of agr	739	18 20
	Ohio Farmer	"	740	23 94
	Chas. H. Woodruff	Labor, carp. work	741	3 33
	Thos. D. Ray	" "	742	7 54
	Slade & Kelton	Lumber, dep. agr.	743	5 92
	W. H. Scott	Notary fees paid, etc	744	1 95
	R. R. Miller	Labor, museum	745	90
	Edward Orton	" "	746	50 00
	Chas. Wetherell	" "	747	1 50
	P. Bauer, Jr	" "	748	8 10
	B. M. Rutan	" "	749	9 00
	Kauffman-Lat. Co	Chemical supplies	750	34 64
	Tallmadge Hdwe Co	Lab. supplies	751	1 50
	Col. Supply Co	" "	752	5 18
	Smith Bros	" "	753	4 20
	Thos. G. Neski	Plumbing	754	119 61
	Blackwood, Green & Co	Stoves	755	33 04
	Chas. H. Woodruff	Carp. work.	756	43 19
	Potts & McCoy	Hardware	757	48 00
	Col. Wire & Iron Works	Railing	758	20 00
	Tallmadge Hdwe. Co	Hardware	759	12 08
	Slade & Kelton	Lumber	760	70 89
	Col. post-office	Stamps	761	10 00
	Thos. D. Ray	Labor, carp. work	762	37 36
	J. W. Reams	"	763	29 75
	Horace Judd	"	764	9 60
	W. G. Plantz	Repairing grate	765	1 30
	J. Rath	" furnaces	766	64 18
	Blackwood, Green & Co.	Stove and repairing	767	$9 70
	Randolph Brandt	Packing for pumps	768	15 73
	E. G. Bailey	Musical instruments	769	9 20
	Library Bureau	Equip. lib., Orton hall	770	1,911 25
	Ruggles-Gale Co	App. dep. history	771	2 00
	A. H. Smythe	" "	772	7 72
	Gustav E. Stechert	Books, dep. Latin	773	11 96
	Lawrence, Butler & B	App. dep. drawing	774	13 30
	Cent. Ohio Paper Co	App. dep. botany	775	4 33
	Thos. D. Ray	App. sch. mines	776	5 56
	Col. post-office	Stamps, acct library	777	4 00
4	F. W. Prentiss, Treas	2 Berlin draft., geo. dep	778	272 57
7	Thos. B. Hunt	Labor, etc	779	24 60
13	Engelke & Bigelow	Fr't and haul'g, $12 28, Hayes hall, $32.50, elec. plant, 24 28, inc	780	68 99
25	W. H. Scott	1-10 salary, Nov. inst., 1893	781	300 00
	Edward Orton	" "	782	225 00
	Sidney A. Norton	" "	783	225 00
	S. W. Robinson	" "	784	225 00
	W. R. Lazenby	" "	785	225 00
	J. R. Smith	" "	786	225 00
	H. A. Weber	" "	787	225 00
	B F. Thomas	" "	788	225 00
	Geo. W. Knight	" "	789	225 00
	H. J. Detmers	" "	790	225 00
	R. D. Bohannan	" "	791	225 00
	D. S. Kellicott	" "	792	225 00
	Ernst A. Eggers	" "	793	225 00
	C. N. Brown	" "	794	225 00
	A. M. Bleile	" "	795	225 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
Nov. 25	W. A. Kellerman	1-10 salary, Nov. inst., 1893	796	$225 00
	Thos. F. Hunt	" "	797	225 00
	S. C. Derby	" "	798	225 00
	N. W. Lord	" "	799	200 00
	A. L. Williston	" "	800	200 00
	F. W. Sperr	" "	801	200 00
	James Chalmers	" "	802	200 00
	Geo. P. Coler	" "	803	180 00
	Jos. V. Denney	" "	804	180 00
	B. L. Bowen	" "	805	180 00
	Geo. W. McCoard	" "	806	160 00
	Jos. N. Bradford	" "	807	160 00
	Geo. B. Kauffman	" "	808	150 00
	Wm. McPherson	" "	809	150 00
	E. A. Hitchcock	" "	810	120 00
	E A. Kemmler	" "	811	120 00
	F. C. Caldwell	" "	812	120 00
	Chas. W. Mesloh	" "	813	100 00
	W. H. Siebert	" "	814	90 00
	H. C. Lord	" "	815	90 00
	W. A. Knight	" "	816	80 00
	W. S. Elden	" "	817	80 00
	F. J. Combs	" "	818	80 00
	Jas. E. Boyd	" "	819	80 00
	Chas. W. Weick	" "	820	80 00
	Olive B. Jones	" "	821	80 00
	Florence Bascom	" "	822	80 00
	L. M. Bloomfield	" "	823	70 00
	C. L. Arnold	" "	824	70 00
	J. R. Taylor	" "	825	70 00
May 25	C. B. Morrey	" "	826	70 00
	W. C. Werner	" "	827	60 00
	Ernest Bradford	" "	828	60 00
	Clair A. Dye	" "	829	60 00
	Wm. F. Hunter	" "	830	60 00
	Herbert Scott	" "	831	50 00
	H. L. Wilgus	" "	832	30 00
	C. W. Foulk	" "	833	15 00
	J. H. McGregor	" "	834	15 00
	T. E. French	" "	835	30 00
	Alexis Cope	Salary for Nov., 1893	836	166 67
	W. C. McCracken	" "	837	100 00
	F. P. Stump	" "	838	60 00
	W. S. Turner	" "	839	60 00
	Chas. Low	" "	840	45 00
	James Kelly	" "	841	40 00
	Wash. Townsend	" "	842	40 00
	Edward Whalen	" "	843	15 00
	F. W. Prentiss	" "	844	8 33
	D. S. White	1-10 salary, Nov. inst., 1893	845	60 00
14	E. O. Randall	Instructor in law school	846	30 00
	Col. post-office	Envelopes	847	11 00
	D. M. Massie	Expenses as trustee	848	9 50
15	W. F. Hunter	Lectures in law school	849	110 00
	D. F. Pugh	" "	850	32 50
	Jas. H. Collins	" "	851	15 00
	O. W. Aldrich	" "	852	45 00
	R. H. Platt	" "	853	30 00
15	Paul Jones	" "	854	47 50
	George W. Knight	" "	855	30 00
	H. L. Wilgus	" "	856	80 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
May 22	Col. water-works	Water rents and charges	857	$129 49
	Col. post-office	Stamps, "	858	10 00
Dec. 1	E. O. Randall	Instructor, law school	859	17 50
4	Col. post-office	Stamps	860	10 00
5	F. W. Prentiss	Int. on ctfs. of indebtness	861	3,300 00
	T. J. Godfrey	Expenses, meeting of com	862	12 95
6	George Raymond	Watchman, 22 da	863	33 00
	Payne-M'Donald Hd. Co	Hardware	864	3 24
	Thos. F. Hunt	Freight, brick for sidewalks	865	33 26
	Kilbourne & Jones	Hardware	866	2 25
	A. W. Livingston's Sons	Seeds for campus	867	1 00
	John Brown	Labor on "	868	28 50
	Dept. Agriculture	Sidewalks "	869	111 85
	Wm. Standley	Fireman, 30 da	870	45 00
	Frank Albrittain	" 28 da	871	42 00
	Benj. Le Bay	" 35 da	872	52 50
	F. A. Nusbaum	Radiator	873	34 20
	Blackwood, Green & Co	Iron pails	874	1 50
	H. Braun, Sons & Co	Oil	875	2 80
	Wells-Fargo Express Co	Express charges	876	5 12
	W. A. Kellerman	Expenses to Chicago	877	20 00
	Col. post-office	Stamps	878	1 91
	A. D. Hamilton	Janitor work	879	8 40
	T. C. Southard	" "	880	8 40
	S. C. Derby	Expenses to Ada	881	7 60
	Alex. Daubert	Janitor, law school	882	7 00
	E. E. Bogue	" work	883	19 95
	F. Homan	" "	884	8 56
Dec. 6	J. M. Ziegler	Janitor "	885	9 00
	J. C. Early	" "	886	18 00
	Dept. Agriculture	Work in library	887	51 08
	C. W. Burkett	Janitor work	888	10 00
	A. S. Pearl	" "	889	15 87
	Richard West	" "	890	15 35
	Ernest Scott	Labor	891	1 13
	D. J. Brumley	Janitor work	892	12 20
	H. M. Finley	Labor, power plant	893	4 50
	Cent. Ohio Paper Co	100 M sheets paper	894	35 00
	Quaker City Chair Co	5 doz. chairs	895	52 50
	E. C. Duke	Moving barn	896	25 00
	Ord. Meyers	Janitor work	897	9 60
	R. R. Miller	" "	898	10 50
	Thos. F. Hunt	Expense to Chicago	899	20 00
	Ira H. Miller	Clerk and notary, Otober and November, 1893	900	82 00
	R. L. Polk & Co	Cols. Directory	901	5 00
	S. K. Carson	Labor, power plant	902	3 00
	F. H. Fox	Labor, " "	903	2 10
	Benjamin Rushmer	General blacksmithing	904	33 85
	Potts & McCoy	Hardware	905	17 48
	Capital City Mch. Wks	Drilling plates	906	5 25
	Thos. G. Neski	Boiler and plumbing	907	160 60
	Horace Judd	Carpenter work	908	9 44
	J. W. Reams	"	909	43 33
	C. H. Woodruff	"	910	56 92
	Thos. D. Ray	"	911	50 25
	H. W. Knight	Building sewer	912	128 75
	Blackwood, Green & Co	Hardware	913	13 73
	Chas. Parkison	Cement	914	8 25
	V. D. Beard & Bro	Painting	915	117 75
	Slade & Kelton	Lumber	916	56 11

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
Dec. 6	Tallmadge Hdw. Co.....	Hardware.....	917	$13 57
	Ochs & King.....	Galv. iron chimney tops.....	918	104 65
	John Fischer.....	Papering.....	919	200 72
	James Clark.....	Plastering.....	920	54 50
	E. A. Cole & Co.....	Coal.....	921	214 63
	Hann & Adair.....	Printing blanks.....	922	8 50
	Spahr & Glenn.....	" "	923	12 25
	D. J. Murdock.....	Advertising.....	924	6 00
	Chas. A. Judson, Jr.....	"	925	10 00
	W. H. Scott.....	50 copies Ohio Journal.....	926	4 50
	Louise Herrick.....	Ass't librarian, November.....	927	15 00
	G. D. Freeman Mfg. Co.	Work, Orton hall.....	928	45 90
	David C. Meehan.....	Shades "	929	224 20
	John Fischer.....	Benches "	930	3 72
	The Jersey Bulletin Co..	Register of cattle.....	931	2 00
	Payne & McDonald.....	Hardware.....	932	40
	D. C. Postle.....	Tile.....	933	21 57
	Col. Transfer Co.....	Manure.....	934	61 00
	Hanna Paint Mfg. Co...	Paint, dept. of agr.....	935	6 15
	Kilbourne & Jones.....	Hardware.....	936	16 29
	J. W. Everall.....	Tile.....	937	24 45
	"	Tile.....	938	7 29
	Richards & Co.....	Chemical supplies.....	939	297 74
	W. H. Loos.....	Labor, test laboratory.....	940	31 35
	Hardesty Bros.....	Bran, etc., for farm, dept. agr..	941	116 25
	Hann & Adair.....	Printing, dept. agr.....	942	11 16
	Kauffman-Latimer Co..	Supplies, "	943	7 50
	The Leavitt Mfg. Co.....	Apparatus, dept. agr.....	944	3 00
	H. H. Haaff.....	Gauge and cutter, dept. agr...	945	2 00
	H. Braun, Sons & Co.....	Thermometers " ...	946	9 00
	William Deering & Co..	Mowers " ...	947	15 00
	Benj. Rushmer.....	Blachsmithing " ...	948	28 00
	Payne & McDonald.....	Hardware " ...	949	5 55
	Thos. B. Hunt.....	Moving barn, etc.....	950	194 00
	H. Braun, Sons & Co....	Supplies, dept. physics.....	951	4 35
	Chas. W. Woodruff.....	" "	952	1 98
	Cent. Electric Co.....	Apparatus "	953	14 45
	General "	" "	954	111 00
	B. F. Thomas.....	Expenses to Ft. Wayne..	955	14 60
	Alexis Cope.....	Exp. to Ft. Wayne, "p'ge Will"	956	18 70
	Cap. City Mch. Works...	Supplies, dept. physics.....	957	4 50
	Hugo Diemer.....	Typewriting, dept. agr.....	958	11 05
	C. W. Burkett.....	Labor, dept. agr.....	959	11 55
	Payne & McDonald.....	Hardware, dept. zoo.....	960	3 70
	J. H. McGregor.....	supplies, dept zoo.....	961	3 90
	Frankenburg Bros.....	Trays "	962	10 50
	Bausch-Lomb Opt'l Co.	Apparatus, dept zoo.....	963	49 91
	The Tallmadge Hdw. Co.	" power plant.....	964	5 15
	Wells, Fargo & Co.'s Ex.	Expressage "	965	8 79
	Chas. H. Woodruff.....	Carpenter work "	966	3 05
	Elliott & McClean.....	Moulding "	967	9 00
	Killbourne, Jones & Co.	Hardware "	968	5 82
	Col. Edison Elect. Co...	Wire "	969	9 68
	Col. Sewer Pipe Co.....	Pipe "	970	8 79
	Samuel Zinn.....	Castings "	971	2 13
	H. I. Freese.....	Labor for Nov. "	972	39 35
	R. F. Fletcher.....	" "	973	50 45
	Mallinckrodt Chemical Works.....	Chem. supplies.....	974	46 96
	Spahr & Glenn.....	Blanks and cards.....	975	18 75
	Tallmadge Hwd. Co.....	Hardware, Hayes hall.....	976	25 78

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893.				
Dec. 6	J. M. & W. Westwater...	Lamp Hayes hall	977	$1 20
	Orr, Brown & Price.	Sulphur "	978	2 48
	H. Braun, Sons & Co.....	Supplies "	979	2 06
	Killbourne, Jones & Co.	" "	980	4 04
	Slade & Kelton.....	Lumber "	981	2 20
	Blackwood, Green & Co.	Barrels "	982	16 00
	The G. B. Schutte Sons & Co.....	Iron bars, etc. "	983	19 34
	The Cherrington Co.....	Stamp "	984	25
	P. Hayden S. Hdw. Co.	Iron "	985	45 95
	Elliot & Maclean	L'mb'r mould'gs "	986	82 40
	Rife's Hyd. Eng. Mfg Co.	Engine for test lab.....	987	30 00
	The Col. Sewer Pipe Co.	Sewer pipe "	988	3 70
	The Pelton Wat'r Wheel Co.....	Motor "	989	40 00
	The Link Belt Mch. Co.	Material "	990	60 00
	The Aschroft Mfg. Co...	Apparatus "	991	11 22
	The Col. Rubber & B. Co.	Belting "	992	70 19
	Potts & McCoy.....	Hardware "	993	1 60
	Kilbourne, Jones & Co.	Hwd. and scale "	994	47 37
	H. W. Brown.....	Labor, test. lab. $20.85, janitor, $7.65.....	995	28 50
	Cap. City Mch. Works	Apparatus, test lab	996	221 39
	Tallmadge Hdw. Co.....	Hardware, test. lab.....	997	52
	Col Supply Co.....	Supplies "	998	48 08
	Borger Bros.....	Tank "	999	94 00
	E. A. Hitchcock.....	Express chgs. "	1000	3 30
	Standard Pavg. Co.....	Plaster'g, etc., "	1001	67 61
	Kauffman, Lattimer & Co	Supplies for store-room.....	1002	114 15
	H. L. Wilgus	19 hrs. law school lectures.....	1003	$47 50
Dec. 9	W. F. Hunter.....	33 hrs. " "	1004	82 50
	J. H. Collins.....	6 hrs. " "	1005	15 00
11	O. W. Aldrich	Lectures, law school	1006	22 50
11	R. H. Platt	"	1007	17 50
	Geo. W. Knight	"	1008	20 00
	W. B. Evans.....	Janitor work	1009	12 55
	R. I. Fulton	Instr. in elocution, fall term...	1010	500 00
16	W. H. Scott	1-10 salary, Dec. inst., 1893	1011	300 00
	Edward Orton.....	" "	1012	225 00
	Sidney A. Norton.....	" "	1013	225 00
	S. W. Robinson.....	" "	1014	225 00
	W. R. Lazenby	" "	1015	225 00
	J. R. Smith.....	" "	1016	225 00
	H. A. Weber	" "	1017	225 00
	B. F. Thomas.....	" "	1018	225 00
	Geo. W. Knight	" "	1019	225 00
	H. J. Detmers.....	" "	1020	225 00
	R. D. Bohannon	" "	1021	225 00
	D. S. Kellicott.....	" "	1022	225 00
	Ernst A. Eggers.....	" "	1023	225 00
	C. N. Brown.....	" "	1024	225 00
	A. M. Bleile	" "	1025	225 00
	W. A. Kellerman	" "	1026	225 00
	Thos. F. Hunt	" "	1027	225 00
	S. C. Derby	" "	1028	225 00
	N. W. Lord.....	" "	1029	200 00
	A. L. Williston.....	" "	1030	200 00
	F. W. Sperr	" "	1031	200 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1893				
Dec. 16	James Chalmers	1-10 salary, Dec. inst., 1893	1032	$200 00
	Geo. P. Coler	" "	1033	180 00
	Jos. V. Denney	" "	1034	180 00
	B. L. Bowen	" "	1035	180 00
	Geo. W. McCoard	" "	1036	160 00
	J. N. Bradford	" "	1037	160 00
	Geo. B. Kauffman	" "	1038	150 00
	Wm. McPherson	" "	1039	150 00
	E. A. Hitchcock	" "	1040	120 00
	E. A. Kemmler	" "	1041	120 00
	F. C. Caldwell	" "	1042	120 00
	C. W. Mesloh	" "	1043	100 00
	W. H. Siebert	" "	1044	90 00
	H. C. Lord	" "	1045	90 00
	W. A. Knight	" "	1046	80 00
	W. S. Elden	" "	1047	80 00
	F. J. Combs	" "	1048	80 00
	Jas. E. Boyd	" "	1049	80 00
	Chas. W. Weick	" "	1050	80 00
	Olive B. Jones	" "	1051	80 00
	Florence Bascom	" "	1052	80 00
	L. M. Bloomfield	" "	1053	70 00
	C. L. Arnold	" "	1054	70 00
	J. R. Taylor	" "	1055	70 00
	C. B. Morrey	" "	1056	70 00
	W. C. Werner	" "	1057	60 00
	Ernst Bradford	" "	1058	60 00
	D. S. White	" "	1059	60 00
	Clair A. Dye	" "	1060	60 00
	Wm. F. Hunter	" "	1061	60 00
	Herbert Scott	1-10 salary, Dec. inst., 1893	1062	$50 00
	H. L. Wilgus	" "	1063	30 00
	T. E. French	" "	1064	30 00
	C. W. Foulk	" "	1065	15 00
	J. H. McGregor	" "	1066	15 00
	Alexis Cope	Salary, Dec., 1893	1067	166 67
	W. C. McCracken	" "	1068	100 00
	F. P. Stump	" "	1069	60 00
	W. S. Turner	" "	1070	60 00
	Chas. Low	" "	1071	45 00
	Geo. Raymond	" "	1072	45 00
	James Kelly	" "	1073	40 00
	Wash. Townsend	" "	1074	40 00
	F. W. Prentiss	" "	1075	8 33
12	Paul Jones	Lectures, law school	1076	25 00
	F. R. Freeman	Account Buf. Forge Co	1077	25 00
14	N. Ohmer	Lecture on fruit culture	1078	10 00
15	Col. post-office	Stamps	1079	30 00
18	R. F. Fletcher	Electric work, October, elec. power plant	1080	52 00
	H. I. Freese	Electric work, October, electric power plant	1081	40 03
	Col. post-office	Wrappers	1082	1 10
21	W. E. Baker	Door slides, Orton hall	1083	13 45
	W. J. McClain	Bal. ests. 16, 17 and final est., Orton hall	1084	11,131 20
22	R. F. Fletcher	Work, electric power plant	1085	28 20
	H. I. Freeze	" "	1086	24 53
23	E. G. Swartzel	Quartermaster, Battalion	1087	5 00
27	W. G. Brown	Copy of Bill, Page will case	1088	6 50
28	Col. post-office	Stamps	1089	48 04

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
Jan. 2	T. C. Southard	Janitor work, chem. lab	1090	$4 95
6	Edward Whalen	Tel. boy, December, 1893	1091	15 00
	Louise Herrick	Work, library, Dec., 1893	1092	15 00
	F. Homan	Janitor, Hayes hall	1093	6 00
	E. O. Randall	Lectures, law school	1094	15 00
	W. F. Hunter	" "	1095	57 50
10	John T. Mack	Expense meeting, Jan., 1894	1096	11 70
	T. J. Godfrey	" "	1097	15 70
11	Fred B. Brewer	Ass't fireman	1098	23 25
13	John L. Trauger	Printing for law school	1099	1 40
	Alex. Daubert	Janitor for Dec., law school	1100	4 67
	R. R. Miller	" Hayes hall	1101	12 30
	The Tracy-Wells Co	Supplies	1102	6 00
	Monypenny, H. & Co	" main building	1103	4 00
	Wm. Standley	Fireman	1104	43 50
	Frank Albrittain	"	1105	34 50
	Benjamin Le Bay	"	1106	46 50
	L. R. Baldwin	Labor	1107	1 35
	D. J. Brumley	Janitor	1108	6 35
	H. D. Hamilton	"	1109	5 55
	Ira H. Miller	Clerical work	1110	7 95
	D. S. Kellicott	Supplies, dept. zoo. and ent	1111	6 60
	John Brown	Labor, roads and grounds	1112	42 75
	Morgan Envelope Co	Paper	1113	15 00
	West. U. Telegraph Co	Messages	1114	75
	F. P. Stump	Cash paid janitor work	1115	6 00
	E. E. Bogue	Labor	1116	15 65
	Ira H. Miller	Cash paid janitor work	1117	18 00
	Wells-Fargo & Co	Expressage	1118	2 65
	C. W. Burkett	Cash paid janitor work	1119	10 00
	Adams Express Co	Expressage	1120	14 25
13	U. S. Express Co	Expressage	1121	9 00
	Cent. U. Telephone Co	Telephone service	1122	62 50
	R. Kuschke	Labor, electric power plant	1123	7 75
	R. F. Fletcher	"	1124	18 35
1893.				
Dec. 22	W. E. Morris, Clerk	Copy petition, Page will case	1125	5 00
1894.				
Jan. 13	E. M. Wilcox	Ass't dep't botany	1126	9 30
	N. S. Townshend	Account of salary	1127	50 00
	H. E. Alvord	Packing exhibit, Worlds Fair	1128	6 00
	Mead & Powell	Veterinary supplies	1129	6 50
	R. N. Mead	Mounting skeleton horse	1130	15 00
	N. C. Powell	"	1131	15 00
	Engelke & Bigelow	Hauling and freight	1132	41 13
	"	" C. E. dep't.	1133	2 06
	C. A. Raymond	Labor, Orton hall	1134	18 27
	Engelke & Bigelow	Hauling, elec. power plant	1135	4 24
	"	" testing laboratory	1136	22 46
	"	" Hayes hall	1137	7 03
	Hugo Diemer	Typewriting, dep't agr	1138	6 40
	C. F. Hirtler	Brickwork, boiler house	1139	9 00
15	W. B. Evans	Janitor work	1140	12 75
13	Blackwood, Green & Co	Supplies, Hayes hall	1141	6 50
	Dundon & Bergin	"	1142	217 99
	TheP.HaydenS.HdweCo	"	1143	29 46
	Edward Schenck	Apparatus, test. laboratory	1144	12 75
	The Geo. F. Blake Co	Pump, "	1145	50 00
	Barrow & Hosler	Supplies, "	1146	8 75
	Am. Express Co	" "	1147	2 80
	Adams Express Co	Expressage, test. laboratory	1148	1 35
6	O. S. U.			

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
Jan. 13	Wheeler Condenser Co..	Condenser, test. laboratory...	1149	$138 00
	Col. Supply Co.....	Supplies, " ...	1150	8 57
	Cap. City Mach. Works.	" " ...	1151	9 98
	Kelton & Moore.....	Lumber, " ...	1152	25 41
	Geo. W. Knight.....	Law lectures.....	1153	12 50
	Karb & Shafer.....	Oil.....	1154	55 12
15	Thos. D. Ray.....	Work, carpenter.....	1155	6 95
	John W. Reams.....	"	1156	5 69
13	R. M. Lee	Elect. work, elect. P. plant....	1157	18 60
	Francis Engler.....	Supplies, test. laboratory	1158	1 25
	J. F. Killits.....	" "	1159	10 00
	Tallmadge Hdwe. Co....	" "	1160	1 65
	Slade & Kelton.....	Lumber, "	1161	5 12
	R. Cilley.....	Labor, "	1162	8 10
	L. A. Frayer..	" "	1163	11 25
	W. A. Loos.....	" "	1164	30 30
	G. W. Burrell.....	" "	1165	26 85
	Col. Bolt Works..	Supplies "	1166	1 72
	Col. Supply Co.....	" "	1167	11 96
	Kelton & Brown.....	Case, "	1168	55 00
	W. N. Zurfluh.....	Labor, elect. power plant.....	1169	3 75
	H. W. Johns Mfg. Co....	Pipe covering, "	1170	56 62
	Kilbourne & Jones Co...	Hardware "	1171	1 50
	The Falls Rivet Co.....	Elect. P. plant, $13 69; dep't physics, $22 58.....	1172	36 27
	Col. Edison Elect L. Co.	Apparatus, elect. power plant.	1173	114 73
	W. G. Minkler.....	Work "	1174	5 10
	Cent. Electric Co.	Apparatus "	1175	192 59
	W. H. Hartsough..... .	Stenographer	1176	5 50
	Horace Judd.....	Carpenter work, Hayes hall....	1177	17 22
	Tallmadge Hdwe. Co....	Hardware, "	1178	64 03
	Slade & Kelton.....	Lumber, "	1179	1 72
	Elliott & MacLean.....	Lumber, Hayes hall.....	1180	$54 65
	The G. B. Schutte Sons' Co	Supplies "	1181	7 66
	The Dunn-Perley Co.....	Coal, "	1182	21 85
	The Tallmadge Hdwe. Co	Supplies, elec. light plant.....	1183	4 29
	Shultz Belting Co.....	Belting, "	1184	59 62
	Hanna Paint Mfg. Co ...	Varnish, etc., "	1185	6 45
	Adams Express Co.....	Expressage "	1186	1 40
	Am. Express Co	" Hayes hall	1187	4 15
	Cap. City Machine Wks.	Work, "	1188	26 80
	Pickering Hdwe. Co	Hdwe., "	1189	16 90
	E. A. Kinsey & Co	" "	1190	14 30
	"	Machinery, "	1191	290 43
	"	" "	1192	212 39
	A. H. Symthe.....	Apparatus, dep. history.....	1193	97
	Ohio Furniture Co.....	Tables	1194	45 00
	Smith & Conklin.....	1 desk, 5 doz. chairs.....	1195	52 00
	Joyce Fish Co	Supplies, dep. zoology...	1196	20 00
	Kilbourne, Jones & Co.	" dep. phys	1197	84
	Engelke & Bigelow.....	Hauling "	1198	23 09
	The Tallmadge Hdwe. Co	Hdwe., "	1199	7 02
	Cent. Elec. Co.....	Apparatus, "	1200	17 50
	Chas. H. Woodruff.....	Carpenter work, dep. phys.....	1201	9 72
	Crystal Ice Co	Supplies, "	1202	6 60
	W. U. Tel. Co.....	Synchronized time, dep. phys.	1203	5 00
	Hann & Adair.....	Printing and advertising.....	1204	3 85
	Barrow and Hosler	Apparatus, dep. Greek	1205	2 25

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
Jan. 15	Soule Photograph Co ...	Apparatus, dep. Greek..	1206	$21 38
	Gustav E. Steckert	Books, "	1207	5 00
	J. R. Smith.....	Express on books	1208	1 85
	Col. Sewer Pipe Co	Supplies, elec. power plant.....	1209	1 95
	Goodrich Hard Rubber Co.....	" "	1210	5 78
	F. C. Audibert.....	" dep. zoo.....	1211	2 75
	H. Braun, Sons & Co ...	" "	1212	5 59
	Geo. W. Patterson & Son	" dep. vet.....	1213	2 50
	Payne McDonald Co.....	" "	1214	2 35
	Henry H. Klott.....	" "	1215	60
	Stitt, Price & Co.....	30 bu., lime.....	1216	3 00
	E. A. Cole & Co.....	327 tons coal	1217	543 71
	Slade & Kelton	Lumber, Orton hall	1218	10 47
	Buffalo Forge Co	Vent. fan and power, Orton hall	1219	353 00
	Cherrington Print. Co ..	Apparatus, dep. bot.....	1220	5 50
	A. S. Pearl	Janitor work, Dec., 1893.....	1221	8 00
	R. S. West	" "	1222	8 00
16	Chas. H. Woodruff.....	Carpenter work.....	1223	28 86
13	Geo. H. Morrell & Co...	Supplies, dep. bot	1224	50
	Frankenberg Bros	Trays, dep. geo..... ..	1225	10 75
	General Elec Co.....	Motor, "	1226	73 00
	Edw. Orton.....	Apparatus, dep. geo.....	1227	10 75
	Tallmadge Hdwe Co.....	Hardware for repairs.....	1228	9 30
	Benj. Rushmer	Blacksmithing.....	1229	1 35
	Potts & McCoy	Hdwe. for repairs.....	1230	10 57
	Blackwood, Green & Co	" "	1231	6 70
	Thos. G. Neski	Plumbing and repairing	1232	110 05
	M. Hertenstein & Co ...	Stove, etc. for vet. dep.....	1233	31 80
	H. L. Wilgus	Leotures at law school.....	1234	32 50
	Richards & Co..	Supplies	1235	3 24
	G. W. Crandall	"	1236	35
	Slade & Kelton.....	" dep. phys.....	1237	3 33
	Ralph Miller	" "	1238	60 00
	McClelland & Co	Supplies, dept. bot.....	1239	5 28
	A.W.Livingtsons' Sons..	" "	1240	1 78
	Kauffman-Lattimer Co..	Chemicals, sup. room.....	1241	136 80
	Col. post-office.....	Stamps	1242	10 00
17	J. Paul Jones.....	Lectures, law school	1243	17 50
26	L. B. Wing	Expenses from Oct. 3, '93 to Jan. 23, '94.....	1244	22 98
27	G. E. Raymond.....	Sal. for Jan., 1894.....	1245	45 00
	Wash Townsend.....	" "	1246	40 00
	James Kelley	" "	1247	40 00
	Chas. Low.....	" "	1248	50 00
Feb. 3	Col. post-office	Stamps	1249	35 00
	Edward Whalen.....	Tel. boy, Jan., 1894.....	1250	15 00
	Louise Herrick.....	Services asst. librarian Jan. '94	1251	15 00
6	H. L. Wilgus	1-10 sal. Jan. inst., 1894.....	1252	30 00
10	R. M. Lee	Electrical work.....	1253	8 85
	F. M. Foster.....	" "	1254	16 42
	R. E. Manley	" "	1255	5 66
	E. F. Gehrkins.....	" "	1256	8 55
	P. H. Hubbard.....	" "	1257	17 02
	R. F. Fletcher.....	Work, elect. power plant.....	1258	54 70
	Engelke & Bigelow	Hauling " "	1259	9 22
	U. S. Express Co	Expressage.....	1260	9 40
	Frank Allbrittain	Fireman, 32½ da	1261	48 75
	Engelke & Bigelow.....	Hauling.....	1262	3 50

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
Feb. 10	L. A. Frayer	Janitor work	1263	$10 65
	C. W. Burkett	"	1264	10 63
Jan. 13	E. M. Wilcox	Labor, dept. bot	1265	9 75
	Bausch-Lomb Opt. Co.	Supplies, "	1266	11 03
Feb. 8	J. Paul Jones	Lectures, law school	1267	27 50
10	I. H. Freese	El. work, elect. plant	1268	62 87
	C. H. Parsarge	Tuning piano	1269	2 00
	T. C. Southard	Janitor work	1270	8 10
	A. D. Hamilton	"	1271	8 10
	Lear & Thurber	Typewriting supplies	1272	2 75
	Ord Myers	Janitor work	1273	9 00
	Adams Express Co.	Expressage	1274	9 80
	Alex. Daubert	Janitor law school, for Jan.	1275	7 00
	D. J. Brumley	" work	1276	11 20
	Ira H. Miller	Clerk 2 mo	1277	80 40
	Benj. Le Bay	Fireman, 31 da.	1278	46 50
	Wm. Standley	" 31 da., 3 hr.	1279	46 95
	F. Homan	Janitor work	1280	11 40
	J. R. Spurrier	" "	1281	4 35
	Engelke & Bigelow	Hauling as per bill	1282	25 52
	E. E. Bogue	Work, green-house	1283	13 90
	W. B. Evans	Janitor work	1284	16 80
	Engelke & Bigelow	Hauling for Hayes hall	1285	5 30
	D. S. White	Supplies, vet. dep't	1286	3 50
	Col. Transfer Co.	Manure, hort. "	1287	31 00
	C. W. Burkett	Labor, dep't agr.	1288	8 58
	Hugo Diemer	Stenographer dep't agr	1289	4 25
	Am. Express Co.	Expressage, testing lab	1290	55
	W. A. Loos	Labor, testing lab	1291	35 25
	Engelke & Bigelow	Hauling for testing lab	1292	1 60
	R. Kuschke	Electrical work	1293	21 63
	E. W. Stull	" "	1294	14 45
	W. U. Tel. Co.	Messages	1295	5 98
	R. R. Miller	Janitor work	1296	11 40
	E. A. Cole & Co.	Coal	1297	705 43
	James Clark	Cementing and plastering	1298	15 80
	James Clark	Varnishing skel., Orton hall	1299	9 20
	W. H. Olmstead	Repairing black-board	1300	63 90
	C. H. Woodruff	Carpenter work	1301	39 57
	T. G. Neski	Plumbing, etc.	1302	38 51
	Potts Supply Co.	Iron railing at Orton hall	1303	111 00
	A. S. Pearl	Painting	1304	2 40
	Thos. D. Ray	Carpenter work dep. phys.	1305	3 05
	Chas. H. Woodruff	" "	1306	2 08
	Engelke & Bigelow	Hauling "	1307	12 51
	Veit Perfler	Apparatus, dep. anat. & phs.	1308	7 50
14	H. L. Wilgus	Lectures, law school	1309	52 50
	Col. post-office	Stamps	1310	7 00
	A. T. McKelvey	Lecture, agr. course	1311	16 00
	W. D. Hoard	" "	1312	20 00
	Wm. F. Pierce, Treas.	Dues, Ohio Col. Assoc.	1313	5 00
17	J. F. Hickman	Lecture, agr. course	1314	17 90
19	R. S. West	Janitor January, 1894	1315	8 00
	A. S. Pearl	" "	1316	9 00
21	L. B. Wing	Expenses Feb. 6 to 20-94	1317	18 51
26	Olive B. Jones	1-10 salary, Jan., inst., 94	1318	80 00
27	C. E. Schenck	Fees fall term refunded	1319	6 50
	W. C. McCracken	Salary Jan. 1894	1320	100 00
10	H. Judd	Carpenter work, Hayes hall	1321	18 06
	J. M. Zeigler	Janitor work	1322	11 55
	W. F. Hunter	1-10 sal. as dean of law sch., Jan	1323	60 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
Feb. 10	W. F. Hunter	Lectures, law school	1324	$82 50
28	James Kelley	Salary for Feb., 1894	1325	40 00
Mar. 1	Chas. Low	" "	1326	50 00
2	N. S. Townshend	Acct. salary	1327	50 00
3	Wash. Townsend	Janitor, Feb., 1894	1328	40 00
6	F. W. Prentiss, Treas.	Foreign ex. for library	1329	4 10
	T. J. Godfrey	Expenses, as trustee	1330	10 31
	L. B. Wing	" "	1331	2 50
7	G. W. Crandell	Copper still, etc	1332	16 10
	R. F. Fletcher	Elect. work, Feb	1333	32 70
	E. O. Randall	Lectures, law. sch	1334	20 00
	C. Ashenhurst	Labor on grounds	1335	6 25
	General Electric Co	P't. payment for dynamos	1336	1,000 00
8	Andrew Kerkins	Apparatus, dep. agr	1337	5 10
	B. F. Thomas	" physics	1338	52 82
	D. S. Kellicott	Supplies, dep. zoo	1339	10 10
	N. W. Kellog Nwps. Co.	Printing and adv	1340	70 00
	Jones & Laughlin	Apparatus, Hayes hall	1341	361 80
	F. C. Cadwell	Account labor of S. H. Fells	1342	26 00
	C. M. Lott	Labor, elect. power plant	1343	1 87
	Payne & McDonald	Supplies, dep. vet	1344	1 35
	D. S. White	" "	1345	12 50
	Hugo Diemer	Typewritting, dep. agr.	1346	4 25
	C. W. Burkett	Labor at green-house	1347	6 35
	C. H. Woodruff	Genl. carp. work	1340	52 47
Feb. 10	E. O. Randall	Lectures, law. sch	1349	22 50
14	J. W. Bannon	Settlement V. M. Land case	1350	150 00
Mar. 8	George Raymond	Salary, Feb., 1894	1351	45 00
	J. L. Nichols	Apparatus, sch. of mines	1352	1 80
	Wainwright Mfg. Co.	6 Wainwright joints	1353	247 00
	J. Rath	Repairs, furnaces	1354	9 24
	R. S. West	Janitor work	1355	7 93
	Allen S. Pearl	"	1356	10 35
	C. W. Burkett	"	1357	8 75
	T. C. Southard	"	1358	7 95
	Ord Myers	"	1359	9 00
	A. D. Hamilton	"	1360	7 95
	Alva Agee	Lecture, dept. agr	1361	13 75
	J. W. Hills	" "	1362	11 25
	F. Charles	Hauling and freight	1363	46 45
	Wm. Standley	Fireman	1364	42 00
	E. G. Swartzel	Labor	1365	4 20
	Alex Daubert	Janitor, law school	1366	7 00
	Park Hotel	3 d. board lecturer	1367	7 50
	D. J. Brumley	Janitor work	1368	12 80
	U. S. Exp. Co	Expressage	1369	9 15
	Engelke & Bigelow	Hauling and freight	1370	17 85
	J. M. Zeigler	Janitor work, Feb'y, '94	1371	10 05
	R. R. Miller	" " "	1372	10 50
	F. Homan	" " "	1373	8 40
	Geo. W. Knight	Cash paid for labor	1374	5 04
	J. R. Spurrier	Janitor, Hayes hall	1375	11 85
	H. Judd	Carpenter work	1376	10 97
	W. Siddall	Apparatus, sch. of mines	1377	1 80
	Louise Herrick	Lib rary asst., Feb'y, '94	1378	15 00
	E. E. Bogue	Labor, bot. dept	1379	13 40
	Ira H. Miller	Clerk, Feb'y, '94	1380	40 00
	C. A. Raymond	Lettering scroll, Orton Hall	1381	23 23
	Theo. Parker	Fireman, 6 da	1382	9 00
	Frank Allbrittain	" 27 da	1383	40 50
	Benj. Le Bay	" 28 da	1384	42 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
March 8	W. B Evans	13 da. labor	1385	$15 45
	W. H. Anderson	2 sets statutes	1386	20 00
16	Ernst A. Eggers	2-10 sal., Jan. and Feb., 1894	1387	450 00
	George W. McCoard	" " "	1388	320 00
17	W. H. Scott	" " "	1389	600 00
	C. N. Brown	" " "	1390	450 00
	Sidney A. Norton	" " "	1391	450 00
	Edward Orton	" " "	1392	450 00
	B. F. Thomas	" " "	1393	450 00
	Geo. W. Knight	" " "	1394	450 00
	H. J. Detmers	" " "	1395	450 00
	R. D. Bohannan	" " "	1396	450 00
	D. S. Kellicott	" " "	1397	450 00
	A. M. Bleile	" " "	1398	450 00
	W. A. Kellerman	" " "	1399	450 00
	Thomas F. Hunt	" " "	1400	450 00
	S. C. Derby	" " "	1401	450 00
	N. W. Lord	" " "	1402	400 00
	A. L. Williston	" " "	1403	400 00
	F. W. Sperr	" " "	1404	400 00
8	W. U. Tel. Co	Message	1405	50
8	Adams Exp. Co	Expressage	1406	7 45
17	S. W. Robinson	2-10 sal., Jan. and Feb., 1894	1407	450 00
	W. R. Lazenby	" " "	1408	450 00
	James Chalmers	" " "	1409	400 00
	Geo. P. Coler	" " "	1410	360 00
	Jos. V. Denney	" " "	1411	360 00
	B. L. Bowen	" " "	1412	360 00
	J. N. Bradford	" " "	1413	320 00
	Geo. B. Kauffman	" " "	1414	300 00
	Wm. McPherson	" " "	1415	300 00
	E. A. Hitchcock	2-10 sal. Jan. and Feb., 1894	1416	$240 00
	E. A. Kemmler	" " "	1417	240 00
	F. C. Caldwell	" " "	1418	240 00
	C. W. Mesloh	" " "	1419	200 00
	W. H. Seibert	" " "	1420	180 00
	Jas. E. Boyd	" " "	1421	160 00
	Chas. W. Weick	" " "	1422	160 00
	Olive B. Jones	1-10 sal. Feb. inst., 1894	1423	80 00
	Florence Bascom	2-10 sal. Jan. and Feb., 1894	1424	160 00
	L. M. Bloomfield	" " "	1425	140 00
	C. L. Arnold	" " "	1426	140 00
	J. R. Taylor	" " "	1427	140 00
	C. B. Morrey	1-10 sal. Jan. inst., 1894	1428	70 00
	"	1-10 sal. Feb. inst., 1894	1429	70 00
	W. C. Werner	2-10 sal. Jan. and Feb., 1894	1430	120 00
	Ernst Bradford	" " "	1431	120 00
	D. S. White	" " "	1432	120 00
	J. R. Smith	" " "	1433	450 00
	H. A. Weber	" " "	1434	450 00
	H. C. Lord	" " "	1435	180 00
	W. A. Knight	" " "	1436	160 00
	Clair A. Dye	" " "	1437	120 00
	Herbert Scott	" " "	1438	100 00
	T. E. French	" " "	1439	60 00
	C. W. Foulk	" " "	1440	30 00
	J. H. McGregor	" " "	1441	30 00
	F. P. Stump	Salary Jan. and Feb., 1894	1442	120 00
	W. S. Turner	" " "	1443	120 00
	F. W. Prentiss	" " "	1444	16 66
19	W. F. Hunter	Sal. as Dean, $60; lect'res $72.50	1445	132 50

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
Mch. 20	N. H. Brown	Asst. Physics-winter term	1446	$75 00
	Harry Garnes	Telephone boy	1447	12 00
21	H. L. Wilgus	Lectures, law; 1-10 sal. Feb., '94	1448	80 00
31	Sidney A. Norton	1-10 sal. March inst., 1894	1449	225 00
	S. W. Robinson	" "	1450	225 00
	W. R. Lazenby	" "	1451	225 00
	J. R. Smith	" "	1452	225 00
	H. A. Weber	" "	1453	225 00
	B. F. Thomas	" "	1454	225 00
	Geo. W. Knight	" "	1455	225 00
	H. J. Detmers	" "	1456	225 00
	R. D. Bohannan	" "	1457	225 00
	D. S. Kellicott	" "	1458	225 00
	Ernst A. Eggers	" "	1459	225 00
	C. N. Brown	" "	1460	225 00
17	W. S. Elden	2-10 sal. Jan. and Feb., 1894	1461	160 00
	F. J. Combs	" "	1462	160 00
31	W. H. Scott	1-10 sal. March inst., 1894	1463	300 00
	Edward Orton	" "	1464	225 00
	A. M. Bleile	" "	1465	225 00
	W. A. Kellerman	" "	1466	225 00
	Thos. F. Hunt	" "	1467	225 00
	S. C. Derby	" "	1468	225 00
	N. W. Lord	" "	1469	200 00
	A. L. Williston	" "	1470	200 00
	F. W. Sperr	" "	1471	200 00
	James Chalmers	" "	1472	200 00
	Geo. P. Coler	" "	1473	180 00
	J. V. Denney	" "	1474	180 00
	B. L. Bowen	" "	1475	180 00
	Geo. W. McCoard	" "	1476	160 00
	J. N. Bradford	" "	1477	160 00
	Geo. B. Kauffman	" "	1478	150 00
	Wm. McPherson	" "	1479	150 00
	E. A. Hitchcock	" "	1480	120 00
	E. A. Kemmler	"	1481	120 00
	F. C. Caldwell	"	1482	120 00
	C. W. Mesloh	" "	1483	100 00
	W. H. Siebert	" "	1484	90 00
	H. C. Lord	" "	1485	90 00
	W. A. Knight	" "	1486	80 00
	W. S. Elden	" "	1487	80 00
	F. J. Combs	" "	1488	80 00
	James E. Boyd	" "	1489	80 00
	Chas. W. Weick	" "	1490	80 00
	Olive B. Jones	" "	1491	80 00
	Florence Bascom	" "	1492	80 00
	L. M. Bloomfield	" "	1493	70 00
	C. L. Arnold	" "	1494	70 00
	J. R. Taylor	" "	1495	70 00
	C. B. Morrey	" "	1496	70 00
	W. C. Werner	" "	1497	60 00
	Ernst Bradford	" "	1498	60 00
	D. S. White	" "	1499	60 00
	Clair A. Dye	" "	1500	60 00
	W. F. Hunter	" "	1501	60 00
	Herbert Scott	" "	1502	50 00
	H. L. Wilgus	" "	1503	30 00
	T. E. French	" "	1504	30 00
	C. W. Foulk	" "	1505	15 00
	J. H. McGregor	" "	1506	15 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
Mch. 31	W. C. McCracken	Salary for March, 1894	1507	$100 00
	F. P. Stump	" "	1508	60 00
	W. S. Turner	" "	1509	60 00
	Chas. Low	" "	1510	45 00
	Geo. Raymond	" "	1511	45 00
	James Kelly	" "	1512	40 00
	Wash. Townsend	" "	1513	40 00
	F. W. Prentiss	" "	1514	8 33
24	I. N. Abernethy	Lectures law school	1515	60 00
	Fairbanks, Morse & Co.	3 sets standards	1516	454 56
28	Gen. Electric Co	Apparatus Mch. L. and P. Pt.	1517	2,675 00
29	R. I. Fulton	Salary, winter term	1518	500 00
30	W. C. McCracken	Salary for Feb., '94	1519	100 00
April 3	T. J. Godfrey	Expenses, meeting of com	1520	9 80
4	E. O. Randall	Lectures law school	1521	25 00
	Potts & McCoy	200 feet hose, etc	1522	132 00
	American Express Co	Expressage	1523	18 70
	Frank Albrittain	Work as fireman	1524	44 25
	Wm. Standley	" "	1525	44 25
	Benj. LeBay	" "	1526	46 50
	C. W. Burkett	Janitor work	1527	9 38
	E. E. Bogue	"	1528	20 50
	F. Homan	"	1529	8 55
	J. R. Spurrier	"	1530	5 78
	W. N. Cowden	Lecture agricultural course	1532	16 10
	J. M. Zeigler	Janitor work	1531	11 63
	Central Ohio Paper Co.	100 M sheets papers	1533	35 00
	McDonald & Grant	Music for band	1534	5 50
	Col. St. R'y Co	Transportation for battalion	1535	20 00
	Karb & Schafer	50 lbs. grease, 1 bbl. oil	1536	28 84
	Ruggles-Gale Co	File boxes	1537	5 60
	R. R. Miller	Janitor work	1538	12 00
	M. A. Scovel, Sec'y	Dues, assoc. of agr., Col	1539	15 00
	Ira H. Miller	Clerk, salary	1540	40 00
	Cap. City Mch. Wks	135 lbs. white waste	1541	11 25
	Tallmadge Hdwe. Co	Hardware	1542	1 05
	Geo. H. Twiss	Stationery	1543	2 45
	Monypeny, H. & Co	Supplies	1544	11 45
	Standard Oil Co	1 bbl. oil	1545	10 37
	Frank A. Nusbaum	Radiator	1546	38 00
	W. U. Tel. Co	Messages	1547	75
	A. D. Hamilton	Janitor work	1548	8 10
	Ord Myers	"	1549	10 50
	T. C. Southard	"	1550	8 10
	W. B. Evans	"	1551	8 40
	F. Charles	Hauling packages	1552	1 25
	D. J. Brumley	Janitor work	1553	11 90
	E. A. Cole & Co	Coal, per contract	1554	1,384 65
	Stitt, Price & Co	Lime	1555	11 25
	Cap. City Mch. Wks	Repairs, steam heating	1556	7 78
	Slade & Kelton	Lumber for repairs	1557	11 00
	Thos. G. Neski	Plumbing	1558	35 63
	F. A. Derthick	Lecture in agr. course	1559	13 00
	E. B. Adams	Lumber	1560	4 67
	Chas. H. Woodruff	Carpenter work	1561	49 30
	Viet & Perfler	Apparatus	1562	6 50
	Chas. F. Wheeler	Pump	1563	5 00
	F. Charles	Hauling	1564	2 00
	Tallmadge Hdwe. Co	Hdwe	1565	5 48
	Blackwood, Green & Co	"	1566	8 30

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
Apr. 4.	Babcock, Wilcox Co	Repairs, boiler	1567	$3 50
	Potts & McCoy	Hdwe. for repairs	1568	103 39
	Col. E. E. Co	Supplies, power plant	1569	158 01
	General Electric Co	"	1570	8 58
	Potts & McCoy	"	1571	2 28
	G. L. Saunders	"	1572	5 10
	Hann & Adair	"	1573	2 00
	Col. Elect. Lgt. & P. Co.	300 lbs. wire	1574	30 00
	G. D. Freeman Mfg. Co	Supplies, power plant	1575	2 00
	H. Braun, Sons & Co	"	1576	15
	H. Mithoff & Co	"	1577	60
	Blackwood, Green & Co	Due 15-gal. can	1578	1 00
	Tallmadge Hdwe. Co	Hdwe. for power plant	1579	12 45
	Kilbourne, Jones & Co	"	1580	1 55
	F. E. Kester	12 hrs. labor	1581	1 50
	Central Electric Co	Supplies, elect. power plant	1582	18 91
	F. Charles	Hauling	1583	2 00
	E. C. Sedgwick	47 hrs. labor	1584	7 05
	Am. Express Co	Expressage	1585	1 50
	Stitt, Price & Co	Cement	1586	85
	Potts & McCoy	Fittings	1587	9 84
	Slade & Kelton	Lumber	1588	31 48
	Tallmadge Hdwe. Co	Hardware	1589	3 67
	Kilbourne, Jones & Co	"	1590	12 91
	Col. Supply Co	Pipe and fittings	1591	29 93
1895.	Cap. City Mach. Wks	Labor and supplies	1592	160 77
April 4	Franklin Fuel Co	Sand testing lab	1593	24 03
	P. Hayden S. & H. C	Castings	1594	2 50
	E. A. Hitchcock	Supplies	1595	3 85
	W. A. Loos	Labor	1596	63 50
	Riehle Bros	Testing machine	1597	100 00
	A.N. Kellogg Newspaper Co	Plates	1598	70 00
	A. W. Livingston's Sons	Seed	1599	6 85
	E. B. Adams	Lumber	1600	5 04
	Terry Engraving Co	Cuts	1501	1 00
	Nitschke Bros	Circulars	1602	92 50
	Spahr & Glenn	Printing	1603	4 00
	Hann & Adair	"	1604	9 15
	John L. Trauger	"	1605	2 00
	Paul C. Carty	"	1606	2 50
	Strobridge Lithog. Co	"	1607	13 50
	E. E. Bogue	32 hrs. labor	1608	4 65
	John Brown	209 " on grounds	1609	27 17
	C. Ashenhurst	193 " "	1610	24 13
	Am. Express Co	Expressage for library	1611	1 40
	U. S. Express Co	" "	1612	5 00
	Wells Fargo & Co	"	1613	25
	Gustav E. Stechert	Books, library	1614	267 58
	Adams Express Co	Expressage	1615	1 10
	Carl Schoenhof	Books, library	1616	3 15
	T. A. Peckham	"	1617	9 00
	F. Charles	Hauling	1618	7 10
	Am. Ins. of El. Eng'rs.	Books, library	1619	5 00
	Ormond Stone	"	1620	2 00
	R. R. Bowker	"	1621	3 66
	Sidney A. Norton	"	1622	15 00
	A. H. Smythe	"	1623	5 05
	Edward Orton	"	1624	3 50
	Ginn & Co	"	1625	50
	Hann & Adair	Printing, library	1626	3 60

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1895.				
April 4	J. L. Trauger	Binding, library	1627	$158 90
	The Outlook Co	1 year's sub. "	1628	2 50
	W. H. Hartsough	Report lect., agr. course	1629	4 75
	H. Cole	Blue print paper	1630	2 00
	Tallmadge Hdwe. Co	Hdwe	1631	3 50
	Geo. L. Singer	Duplex brooders	1632	54 00
	Hugo Diemer	Services as stenographer	1633	5 25
	C. W. Burkett	Clerical work	1634	6 40
	A. H. Smythe	Books, dep. hist	1635	1 99
	Sheehan & Co	2 books, "	1636	6 25
	Kimball & Matthews	Limes, 1 doz	1637	1 50
	W. & L. E. Gurley	Repairing level tube	1638	1 59
	Joseph Tyrrell	Horse model	1639	21 00
	Cornish C. & G. Mfg. Co	Testg. tube	1640	2 00
	C. T. Pfaff & Co	4 lamps, vet. dept	1641	3 50
	Hann & Adair	Stationery, etc., vet. dept	1642	4 40
	H. Braun, Sons & Co	Supplies "	1643	10 93
	Kimball & Matthews	" "	1644	1 40
	R. S. West	Janitor, Orton hall	1645	7 95
	A. S. Pearl	" "	1646	9 15
	Wm. Caldwell	Partition "	1647	108 00
	A. W. Jackson & Son	Binding book, dep. Greek	1648	1 50
	Quaker City Chair Co	2 doz. chairs	1649	21 00
	David C. Meehan	3 shades, etc	1650	9 30
	The People's Store	2 desks, etc	1651	67 00
	Tallmadge Hdw. Co	Hardware	1652	1 22
	Cambridge Bot. Sup. Co	Bibliography Am. Botany	1653	5 00
	Palmer Slide Co	2 circles, bot. lab	1654	2 16
	A. W. Livingston Sons	Seed..s.	1655	50
	E. E. Nicholas	Mathamatical apparatus	1656	5 54
	Gustav E. Stechert	Theory of Functions	1657	9 25
	Tallmadge Hdw. Co	3 lbs. brass	1658	70
	A. H. Smythe	Mimeograph and paper	1659	16 90
	A. W. Jackson & Son	Binding books, dep. Latin	1660	5 25
	Gustav E. Stechert	Books, dep. Latin	1661	1 40
	The Coller'y Eng. Co	Subscription "Col. Eng"	1662	2 00
	Tallmadge Hdw. Co	Hdw., school of mines	1663	1 50
	Chas. H. Woodruff	Carp. work, school of mines	1664	3 61
	Chamberlain & Moore	Hatchet, school of mines	1665	50
	C. W. Davis	Labor, school of mines	1666	5 60
	Potts & McCoy	Hardware	1667	12 54
	Palmer Slide Co	Apparatus, dep. geology	1668	1 52
	Chas. H. Woodruff	Carpenter work	1669	2 50
	Nitschke Bros	500 Letter heads, dep. phys	1670	2 50
	Potts & McCoy	Ladle, dep. phys	1671	35
	Cent. Union Tel. Co	Rent time wire, dep. phys	1672	25 00
	Tallmadge Hdw. Co	Iron, dep. phys	1673	56
	Am. Express Co	Expressage, dep. phys	1674	2 20
	Col. Brass Co	Castings, dep. phys	1675	3 63
	Edwin Kelton & Co	Lumber, dep. phys	1676	19 99
	E. A. Kinsey & Co	Machine "	1677	14 00
	Schultz Belting Co	Belting, dep. phys	1678	50 98
	Alfred Miller	Apparatus, dep. phys	1679	43 75
	Am. Express Co	Expressage, Hayes hall	1680	2 15
	Louise Herrick	Services, ass't librarian	1681	15 00
	Hanna Paint M'f'g Co	Paint, Hayes hall	1682	11 95
	H. Braun, Sons & Co	Supplies, "	1683	5 75
	G. B. Schultz & Sons Co	" "	1684	9 73
	F. Charles	Hauling, "	1685	1 00
	P. Hayden Sad. Hdw. Co	Iron and castings, Hayes hall	1686	29 52
	E. A. Kinsey & Co	Hdw. sup., Hayes hall	1687	55 35

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1895.				
Apri 4	Shilling Foundry Co.....	Castings, Hayes hall.....	1688	$22 46
	The Lodge & Davis Co..	Nut box frame, "	1689	3 00
	E. A. Kinsey & Co.....	Hardware.....	1690	96 49
	Cap. City Mch. Works...	Pulleys "	1691	4 86
	J. Carbutt.....	Chem. supplies.....	1692	47 94
	J. & H. Berge.....	"	1693	49 64
	The Roessler & H..... Chem. Co.....	Chromic acid.....	1694	12 00
	Richards & Co	Chemicals for supply room.....	1695	17 35
	Tallmadge Hdw. Co.....	Hardware	1696	1 75
	Harry Garnes.....	Services, office boy.....	1697	15 00
	C. A. Dye.....	Apparatus, sup. room.....	1698	3 60
	Eimer & Amend.....	" "	1699	15 66
	Mallinckrodt Co.....	Chemicals for supply room.....	1700	45 14
	Kauffman-Lattimer Co..	" "	1701	194 81
	Col. Transfer Co.	28 loads manure.....	1702	28 00
	E. W. Pegg.....	2 horses, dep. hort.....	1703	250 00
	Ed. Schenck.....	Patterns for test. lab	1704	43 00
	Alex. Daubert.....	Janitor law school	1705	7 00
	W. F. Hunter.....	Lectures, law school.....	1706	90 00
	W. I. Chamberlain.....	Expenses meeting board, Jan. 9 and Apr. 11, 1894.....	1707	19 55
	T. J. Godfrey	Expenses meeting board, Apr. 11, 1894.....	1708	12 20
	Lucius B. Wing.....	Expenses Mar. 24, Apr. 11, '94.	1709	10 80
	The J. J. Snider Lumber Co.....	Lumber, drawing tables.....	1710	110 00
1894.				
April 14	F. W. Prentiss, Treas....	Foreign exchange	1711	84 19
	Pratt & Whitney Co.....	Apparatus, Hayes hall.....	1712	30 36
	Shilling F'dy Co.....	Castings, " "	1713	19 24
	Pickering Hardw'e Co..	Hardware, " "	1714	20 38
	Cap. City Mch. Works..	Pulley, " "	1715	2 07
	Blackwood, Green & Co	Tank, " "	1716	3 84
	Tracy-Wells Co.....	Brooms, " "	1717	80
	Jeffrey Mfg Co.....	Repairs on dynamo.....	1718	2 50
	Tallmadge Hardw'e Co.	Hardware, Hayes hall.....	1719	26 30
18	Miss A. E. Dodge.....	Rubber stamp.....	1720	2 50
19	A. E. Dodge.....	" "	1721	2 00
28	F. W. Prentiss.....	Salary, April, 1894.....	1722	8 33
	W. H. Scott	1-10 salary, April inst., '94.....	1723	300 00
	Edw. Orton.....	" "	1724	225 00
	Sidney A. Norton.....	" "	1725	225 00
	S. W. Robinson	" "	1726	225 00
	W. R. Lazenby.....	" "	1727	225 00
	J. R. Smith.....	" "	1728	225 00
	H. A. Weber.....	" "	1729	225 00
	B. F. Thomas.....	" "	1730	225 00
	Geo. W. Knight.....	" "	1731	225 00
	H. J. Detmers	" "	1732	225 00
	R. D Bohannan.....	" "	1733	225 00
	D. S. Kellicott.....	" "	1734	225 00
	Ernst A. Eggers..	" "	1735	225 00
	C. N. Brown.....	" "	1736	225 00
	A. M. Bleile.....	" "	1737	225 00
	W. A Kellerman.....	" "	1738	225 00
	Thos. F. Hunt.....	" "	1739	225 00
	S. C. Derby.....	" "	1740	225 00
	N. W. Lord.....	" "	1741	200 00
	A. N. Williston.....	" "	1742	200 00
	F. W. Sperr.....	" "	1743	200 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
April 28	James Chalmers	1-10 salary, April inst., '94	1744	$200 00
	Geo. P. Coler	" "	1745	180 00
	J. V. Denney	" "	1746	180 00
	B. L. Bowen	" "	1747	180 00
	Geo. W. McCoard	" "	1748	160 00
	J. N. Bradford	" "	1749	160 00
	G. B. Kauffman	" "	1750	150 00
	Wm. McPherson	" "	1751	150 00
	E. A. Hitchcock	" "	1752	120 00
	E. A. Kemmler	" "	1753	120 00
	F. C. Caldwell	" "	1754	120 00
	Chas. W. Mesloh	" "	1755	100 00
	W. H. Siebert	" "	1756	90 00
	H. C. Lord	" "	1757	90 00
	W. A. Knight	" "	1758	80 00
	W. S. Elden	" "	1759	80 00
	F. J. Combs	" "	1760	80 00
	Jas. E. Boyd	" "	1761	80 00
	Chas. W. Weick	" "	1762	80 00
	Olive B. Jones	" "	1763	80 00
	Florence Bascom	" "	1764	80 00
	L. M. Bloomfield	" "	1765	70 00
	C. L. Arnold	" "	1766	70 00
	J. R. Taylor	" "	1767	70 00
	C. B. Morrey	" "	1768	70 00
	Ernest Bradford	" "	1769	60 00
	D. S. White	1-10 salary, inst. 1894	1770	60 00
	W. F. Hunter	" "	1772	60 00
	Clair A. Dye	" "	1771	60 00
	Herbert Scott	" "	1773	50 00
	H. L. Wilgus	" "	1774	30 00
	T. E. French	" "	1775	30 00
	C. W. Foulk	" "	1776	15 00
	J. H. McGregor	" "	1777	15 00
	W. C. McCracken	Salary for April, 1894	1778	100 00
	F. P. Stump	" "	1779	60 00
	W. S. Turner	" "	1780	60 00
	Chas. Low	" " (Bal.)	1781	55 00
	Geo. Raymond	" "	1782	45 00
	James Kelly	" "	1783	40 00
	Wash. Townsend	" "	1784	40 00
	H. L. Wilgus	Lecture law school	1785	55 00
	Henry Garnes	Messenger, April, 1894	1786	15 00
May 3	John T. Mack	Expenses, meetings	1787	17 40
	D. M. Massie	" "	1788	21 55
	W. I. Chamberlain	" "	1789	14 30
	T. J. Godfrey	" "	1790	10 90
	L. B. Wing	" "	1791	8 95
5	Park Hotel	Board 1 d., W. W. Cowden	1792	2 50
	L. A. Frayer	Janitor work	1793	13 87
	Richard West	"	1794	10 05
	Allen S. Pearl	"	1795	9 00
	N. H. Brown	Asst. in phys. lab., April	1796	25 00
	M. A. Scovell	Lectures, agr. course	1797	34 60
	W. B. Evans	Janitor work	1798	6 45
	Alex. Daubert	" law school	1799	7 00
	Hugo Diemer	Type-writing	1800	75
	J. R. Spurrier	Janitor work	1801	10 35
	J. M. Ziegler	"	1802	9 30
	F. Homan	"	1803	8 55
	R. R. Miller	"	1804	9 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
May 5	Cent. U. Tel. Co.	Rent of telephones	1805	$62 50
	Viesers Livery	Coupe	1806	2 50
	The Tracy-Wells Co.	Show cases, etc.	1807	188 00
	E. G. Swartzel	Quartermaster, winter term	1808	5 00
	Hasbrook & Byers	Tray	1809	1 25
	J. W. Bannon	Printing, brief	1810	21 00
	A. D. Hamilton	Janitor work	1811	8 10
	Ord. Myers	"	1812	9 00
	T. C. Southard	"	1813	8 10
	M'ypenny, Ham'd & Co.	1 case lye	1814	1 65
	Chas. Harkness	1 bbl. oil	1815	26 00
	Wm. Standley	Services as fireman	1816	42 75
	F. Albrittain	" "	1817	41 25
	Benj. Le Bay	" "	1818	39 00
	D. J. Brumley	Janitor	1819	12 25
	J. C. Tyler	Clinker bar	1820	1 00
	Ira H. Miller	Clerk and notary, April, 1894	1821	40 80
	Richards & Co	Supplies, dep. anat. & physio.	1822	8 00
	C. B. Morrey	" "	1823	24 22
	U. S. Express Co.	Charges on apparatus, vet. dep	1824	8 58
	C. H. Woodruff	Carpenter work	1825	6 94
	A. W. Livingston's Sons	Seeds	1826	5 50
	Richard Kuschke	Labor, roads and grounds	1827	12 88
	John H. Brown	" "	1828	30 55
	F. L. Getz	Labor, roads and grounds	1829	8 40
	E. E. Bogue	" "	1830	4 55
	F. W. Sperr	Supplies, sch. of mines	1831	29 92
	C. H. Woodruff	Carpenter work, sch. of mines	1832	30 83
	"	" repairs	1833	23 92
	A. F. Wilcox	Labor in museum	1834	19 85
	James Chalmers, secy.	University ext. fee	1835	10 00
	E. O. Randall	Lectures, law school	1836	45 00
	E. A. Hitchcock	Supplies, testing laboratory	1837	5 75
	E. A. Cole & Co.	Coal	1838	523 16
	Andrew Kerrins	Tripods, dept. anat. & physio.	1839	1 50
	Freda Detmers	Labels, dept. botany	1840	15 00
	Cent. Electric Co.	Apparatus, dept. anat. & physio	1841	4 26
	Williams, Brown & Earle	" "	1842	5 25
	Queen & Co	1 Minot microtome "	1843	49 31
	Hann & Adair	1000 packet heads "	1844	2 25
	H. Braun, Sons & Co.	Supplies "	1845	16 62
	McClelland & Co.	" dept. botany	1846	5 18
	Nitschke Bros.	Printing "	1847	10 75
	H. Braun, Sons & Co.	Supplies "	1848	6 79
	Tallmadge Hdwe Co.	Hardware, department physics	1849	1 20
	Kilbourne, Jones & Co.	" "	1850	2 25
	Blackwood, Green & Co.	" "	1851	5 70
	Weston Elect. Inst. Co.	Repairing volt meter	1852	8 16
7	A. Dow & Sons	3000 brick, mining dept.	1853	15 00
7	E. O. Vaile	Adv. the university	1854	10 00
	A. N. Kellogg Newspaper Co.	100 sets plates, advertising	1855	210 00
	Paul C. Carty	Postal cards and printing	1856	3 75
	Hann & Adair	Printing	1857	7 55
	McClelland & Co.	Supplies, school of mines	1858	1 20
	Columbus Gas Co.	50 bu. coke "	1859	3 25
	Potts & McCoy	Brass rod	1860	20
	J. E. Stuntz	20 hrs. labor	1861	3 00
	Edwin Kelton & Co.	Lumber for school of mines	1862	22 70
	Payne & McDonald	Hardware "	1863	90
	Tallmadge Hdwe. Co.	" "	1864	7 74

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
May 7	T. G Neski	Plumbing	1865	$9 52
	Tallmadge Hdwe. Co.	Hardware	1866	3 66
	Central Ohio Paper Co.	Roofing felt	1867	1 10
	Coe & Zinn	Lumber	1868	1 18
	Blackwood, Green & Co.	Eaves trough	1869	2 95
	Cleveland Supply Co.	Repairs on engine	1870	4 50
	Cap. City Mch. Works	Labor, etc., water measure	1871	48 07
	Col. Supply Co.	Supplies, test. laboratory	1872	29 50
	Jeffrey Mfg. Co.	Key steel, ind. dept	1873	1 26
	P. Hayden S. Hdwe. Co.	Supplies	1874	53
	Cap. City Mch. Co.	Belt hooks	1875	1 00
	H. Braun, Sons & Co.	One-half gallon alcohol	1876	1 20
	Tallmadge Hdwe. Co.	Hdwe., ind. dept	1877	20 97
	Elliot, Maclean & Co.	Lumber "	1878	43 85
	Am. Express Co.	Expressage, library	1879	2 30
	H. U. Riggle	Salary for April	1880	40 00
	E. M. Wilcox	"	1881	20 00
	Library Bureau	Books for library	1882	3 75
	A. H. Smythe	"	1883	5 08
	Spahr & Glenn	Letterheads, library	1884	2 50
	J. N. Bradford	11 illustrations, dep. Greek	1885	25 00
	I. W. Hills	Slides, department agr.	1886	10 50
	Col. Transfer Co.	31 loads manure	1887	31 00
	A. H. Smythe	Apparatus, dept. history	1888	14 15
	Yost & Packard	Arch. fees, Orton hall	1889	406 25
	Edwin Kelton	Lumber, roads and g	1890	3 84
	Frankenburg Bros.	Trays, dept. geology	1891	3 25
	Edward Orton	Supplies, "	1892	1 00
	John L. Trauger	Binding books, dept. Latin	1893	2 20
	Gustav E. Stechert	Books, dept. Latin	1894	5 68
	Powell & Mead	Supplies, vet. dept	1895	2 00
	H. Braun, Sons & Co.	" "	1896	7 50
	Hann & Adair	Placards, etc	1897	14 70
	Hugo Diemer	Typewriting	1898	4 00
	C. W. Burkett	Janitor work	1899	13 38
	Tallmadge Hdw. Co.	Dental sup., storeroom	1900	85
	Henry Troemer	Apparatus, sup. room	1901	69 50
	Eimer & Amend	Chemicals, "	1902	2 70
	Col. Supply Co.	Supplies, "	1903	3 04
	Andrew Dobbie	Towels, "	1904	2 23
	Kimball & Mathews	Photograph supplies	1905	24 60
	McClelland & Co.	Tablets, supply room	1906	2 00
	Kauffman-Lattimer Co.	Chemicals, "	1907	161 24
	Merck & Co.	" "	1908	18 53
12	Alexis Cope	Salary to April 30, 1894	1909	781 25
	F. W. Prentiss, Treas.	Foreign ex. for sup. room	1910	295 01
14	J. M. & W. Westwater	Apparatus, test lab.p.p. and inc.	1911	29 58
	W. I. Chamberlain	Traveling expenses	1912	73 15
	O. W. Aldrich	Lectures, law school	1913	102 50
22	Cols. post-office	Stamps	1914	10 00
26	W. H. Scott	1-10 salary, May inst., 1894	1915	300 00
	Edward Orton	" " "	1916	225 00
26	Sidney A. Norton	" " "	1917	225 00
	S. W. Robinson	" " "	1918	225 00
	W. R. Lazenby	" " "	1919	225 00
	J. R. Smith	" " "	1920	225 00
	H. A. Weber	" " "	1921	225 00
	B. F. Thomas	" " "	1922	225 00
	Geo. W. Knight	" " "	1923	225 00
	H. J. Detmers	" " "	1924	225 00
	R. D. Bohannan	" " "	1925	225 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
May 26	D. S. Kellicott	1-10 salary, May inst., 1894	1926	$225 00
	Ernst A. Eggers	" "	1927	225 00
	C. N. Brown	" "	1928	225 00
	A. M. Bleile	" "	1929	225 00
	W. A. Kellerman	" "	1930	225 00
	Thos. F. Hunt	" "	1931	225 00
	S. C. Derby	" "	1932	225 00
	N. W. Lord	" "	1933	200 00
	A. L. Williston	" "	1934	200 00
	F. W. Sperr	" "	1935	200 00
	James Chalmers	" "	1936	200 00
	Geo. P. Coler	" "	1937	180 00
	Jos. V. Denney	" "	1938	180 00
	B. L. Bowen	" "	1939	180 00
	Geo. W. McCoard	" "	1940	160 00
	Jos. N. Bradford	" "	1941	160 00
	Geo. B. Kauffman	" "	1942	150 00
	Wm. McPherson	" "	1943	150 00
	E. A. Hitchcock	" "	1944	120 00
	E. A. Kemmler	" "	1945	120 00
	F. C. Caldwell	" "	1946	120 00
	C. W. Mesloh	1-10 salary May inst., 1894	1947	100 00
	W. H. Seibert	" "	1948	90 00
	H. C. Lord	" "	1949	90 00
	W. A Knight	" "	1950	80 00
	W. S. Elden	" "	1951	80 00
	F. J. Combs	" "	1952	80 00
	James E. Boyd	" "	1953	80 00
	Chas. W. Weick	" "	1954	80 00
	Olive B. Jones	" "	1955	80 00
	Florence Bascom	" "	1956	80 00
	L. M. Bloomfield	" "	1957	70 00
	C. L. Arnold	" "	1958	70 00
	J. R. Taylor	" "	1959	70 00
	C. B. Morrey	" "	1960	70 00
	Chas. Low	Salary for May, 1894	1961	50 00
	Ernest Bradford	1-10 salary May inst., 1894	1962	60 00
	D. S. White	" "	1963	60 00
	Clair A. Dye	" "	1964	60 00
	Wm. F. Hunter	" "	1965	60 00
	Herbert Scott	" "	1966	50 00
	H. L. Wilgus	" "	1967	30 00
	C. W. Foulk	" "	1968	15 00
	J. H. McGregor	" "	1969	15 00
	W. C. McCracken	Salary, May, 1894	1970	100 00
	F. P. Stump	" "	1971	60 00
	W. S. Turner	" "	1972	60 00
	Jas. Kelly	" "	1973	40 00
	Wash. Townsend	" "	1974	40 00
	Henry Garnes	" "	1975	15 00
	F. W. Prentiss	" "	1976	8 33
	Geo. Raymond	" "	1977	45 00
23	Col. Post-office	Stamps	1978	15 00
	Col. Water-works	Water to May 1, '94	1979	305 47
24	Louise Herrick	Services as asst. librarian	1980	15 00
	J. Paul Jones	Lectures, law school	1981	47 50
26	F. J. Godfrey	Expenses, east. trip and m't'g	1982	77 53
	L. B. Wing	" "	1983	60 73
	W. I. Chamberlain	" meeting this day	1984	13 05
	John T. Mack	" "	1985	8 20
28	Col. Post-office	Stamps	1986	2 50

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
May 29	Warren K. Moorehead...	Salary as curator.....	1987	$150 00
	Col. Post-office.....	Stamps	1988	5 00
	Chas. Bryson.....	Repairing furniture.....	1989	23 50
	D. S. White	Apparatus, vet. dept.....	1990	25 00
	Am. Express Co.....	Expressage.....	1991	38 54
	Frank Allbrittain.....	12 da. as fireman.....	1992	18 00
	Alexis Cope.....	Expenses to Akron, etc.....	1993	11 65
	Viet & Perfler.....	Apparatus, dep. anat. and phy.	1994	4 75
	Eastman Kodak Co.....	Photo supplies.....	1995	12 00
	Kauffman-Lattimer Co..	Chem. supplies.....	1996	53 06
	Richards & Co.	"	1997	130 30
	Murphy Iron Works.....	Balance due as per contract....	1998	150 00
	" "	16 iron clinker bars.....	1999	62 00
	Blackwood, Green & Co.	Iron conductor.....	2000	1 95
	Thos. E. Rowlands.....	Painting.....	2001	7 35
	Webb Stationery Co.....	2 check books.....	2002	18 00
	Ohio Farmer.....	138 copies.....	2003	4 14
	The Press-Post.....	Adv. prop. sale of bonds.....	2004	11 70
	Hann & Adair.....	Printing circulars, etc.....	2005	110 95
	E. M. Wilcox.....	Services at green-hse, bot. dep.	2006	20 00
	H. U. Riggle	Sal., supt. " "	2007	40 00
	W. F. Hunter.....	Lectures, law school.....	2008	100 00
June 16	W. H. Scott	1-10 sal., June inst., 1894.....	2009	300 00
	Edward Orton.....	" "	2010	225 00
	Sidney A. Norton.....	" "	2011	225 00
	S. W. Robinson.....	" "	2012	225 00
	W. R. Lazenby.....	" "	2013	225 00
	J. R. Smith.....	" "	2014	225 00
	H. A. Weber..	" "	2015	225 00
	B. F. Thomas.....	" "	2016	225 00
	Geo. W. Knight	" "	2017	225 00
	H. J. Detmers.....	" "	2018	225 00
	R. D. Bohannan.....	" "	2019	225 00
	D. S. Kellicott.....	" "	2020	225 00
	Ernest A. Eggers	" "	2021	225 00
	C. N. Brown.....	" "	2022	225 00
	A. M. Bleile.....	" "	2023	225 00
May 28	The Lantern Co..	Advertising.....	2024	150 00
	W. A. Kellerman.....	1-10 sal., June inst., 1894.....	2025	225 00
June 16	Thos. F. Hunt.....	" "	2026	225 00
	S. C. Derby.....	" "	2027	225 00
	N. W. Lord.....	" "	2028	200 00
	A. L. Williston	" "	2029	200 00
	F. W. Sperr	" "	2030	200 00
	Jas. Chalmers.....	" "	2031	200 00
	Geo. P. Coler.....	" "	2032	180 00
	Jos. V. Denney.....	" "	2033	180 00
	B. L. Bowen	" "	2034	180 00
	Geo. W. McCoard.....	" "	2035	160 00
	Jos. N. Bradford	" "	2036	160 00
	Geo. B. Kauffman.....	" "	2037	150 00
	Wm. McPherson.....	" "	2038	150 00
	E. A. Hitchcock	" "	2039	120 00
	E. A. Kemmler	" "	2040	120 00
	F. C. Caldwell	" "	2041	120 00
	C. W. Meshoh	" "	2042	100 00
	W. H. Siebert.....	" "	2043	90 00
	H. C. Lord	" "	2044	90 00
	W. A. Knight.....	" "	2045	80 00
	W. S. Elden	" "	2046	80 00
	F. J. Combs.....	" "	2047	80 00

STATEMENT II—Continued.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
June 16	Jas. E. Boyd	1-10 sal., June inst., 1894	2048	$80 00
	Chas. W. Weick	" "	2049	80 00
	Olive B. Jones	" "	2050	80 00
	Florence Bascom	" "	2051	80 00
	L. M. Bloomfield	" "	2052	70 00
	C. L. Arnold	" "	2053	70 00
	J. R. Taylor	" "	2054	70 00
	C. B. Morrey	" "	2055	70 00
	Ernest Bradford	" "	2056	60 00
	D. S. White	" "	2057	60 00
	Clair A. Dye	" "	2058	60 00
	W. F. Hunter	" "	2059	60 00
	Herbert Scott	" "	2060	50 00
	H. L. Wilgus	" "	2061	30 00
	C. W. Foulk	" "	2062	15 00
	J. H. McGregor	" "	2063	15 00
	T. E. French	" "	2064	30 00
May 30	Col. Post-office	Stamps	2065	$3 00
June 4	F. W. Prentiss, Treas	Int. due 6-1-'94, ctf. of indt	2066	3,300 00
17	S. H. Todd	Lecture Agr. course and exp	2067	17 00
8	I. N. Albernathy	Lectures law school	2068	55 00
	Alexis Cope	Salary as secretary, May, '94	2069	187 50
	Col. Post-office	Stamps	2070	12 00
9	Louise Herrick	Services as librarian, May, '94	2071	15 00
	Col. Post-office	Stamps	2072	30 00
	T. E. French	1-10 salary, May inst., '94	2073	30 00
13	W. R. Harper	Commencement address	2074	50 00
	John T. Mack	Expenses attending meetings	2075	12 95
	W. I. Chamberlain	" "	2076	21 40
	D. M. Massie	" "	2077	17 50
14	A. S. Pearl	Janitor Orton hall	2078	14 25
	J. M. Zeigler	Janitor Hayes hall	2079	22 50
	J. R. Spurrier	" "	2080	24 75
	D. F. Pugh	Lectures law school	2081	122 50
	Henry Garnes	Services to date	2082	10 00
	H. J. Detmers	Cash paid for repairs	2083	6 00
	T. C. Southard	Janitor work	2084	8 10
	D. J. Brumley	"	2085	17 00
15	C. W. Burkett	"	2086	8 13
	A. D. Hamilton	Janitor chem. hall	2087	10 65
	Chas. Low	19 hrs. fireman	2088	5 70
	Wm. Standley	27 da. fireman	2089	41 02
	Fred Parker	1 da. labor	2090	1 50
	Ord Myers	60 hrs. janitor work	2091	9 00
	E. G. Swartzell	Services as quartermaster	2092	5 00
	L. A. Frayer	68 hrs. janitor work	2093	10 20
	Alex. Daubert	Janitor law school	2094	9 33
	R. R. Miller	" work	2095	21 00
	R. S. West	" "	2096	14 25
	F. Homan	" "	2097	13 50
	Ira H. Miller	Clerk and notary, May, '94	2098	41 60
	N. H. Brown	Ass't 2 mo. phy. lab	2099	50 00
	C. W. Burkett	24 hrs. labor @17½c	2100	4 20
	Geo. W. Rightmire	Instructor, civil government	2101	50 00
	J. R. Smith	Expenses visit'g high schools	2102	13 70
	S. Pentland	Trustee expense at Neil House	2103	13 00
	Freda Detmers	Labels for dept. bot	2104	21 45
	Carl Patterson	Fee refunded	2105	6 50
	Wm. McPherson	Supplies chem. lab	2106	2 05
16	R. Kuschke	Labor, roads and grounds	2107	29 63
	John H. Brown	" "	2108	34 84

STATEMENT II—Concluded.

Date.	To whom paid.	For what purpose.	No.	Amount.
1894.				
June 23	J. J. Freeland	Castings, testg. lab	2109	$3 31
	Penn. Fuel Co	1 car screenings	2110	26 45
	F. L. Getz	Labor, roads and grounds	2111	6 60
	R. R. Miller	Labor, elec. power plant	2112	12 15
	Brown & Sons	Rep. house and ptg. dep. bot	2113	10 50
	Chas. H. Woodruff	Carpenter work, M. E. dept	2114	64 31
19	Alexis Cope	Salary for June, 1894	2115	187 50
20	L. R. Baldwin	Work on herbarium	2116	3 60
22	R. H. Platt	Lectures, law school	2117	82 50
	T. C. Southard	Janitor work, chem hall	2118	7 50
	A. O. Jones B. & T. C. Co	Sidewalk brick	2119	88 84
	Wesley C. Bates	Adv. law school	2120	2 00
	The Laning Printing Co	8,000 catalogues	2121	435 00
	C. T. Herbert, Treas. Makio	Adv. in Makio	2122	50 00
23	W. A. Hiatt	Work, commencement	2123	9 60
	Ord Myers	Janitor work, chem. hall	2124	$4 50
	R. F. Fletcher	Running circuit to barn	2125	180 00
	Col. Post-office	Stamps	2126	22 40
	"	Stamps	2127	22 00
	H. L. Wilgus	Lectures, law school	2128	162 50
	T. J. Godfrey	Expenses meetings	2129	21 30
	John T. Mack	" trustees	2130	8 95
27	W. I. Chamberlain	" meetings	2131	15 05
27	Jos. T. Duryea	" visiting university	2132	45 00
	Col. Post-office	Envelopes, 2,000 @ 1 cent	2133	22 40
29	D. M. Griffith	Work, commencement	2134	10 35
	W. C. McCracken	Salary for June, 1894	2135	100 00
	James Kelly	" "	2136	40 00
	Chas Low	" "	2137	50 00
	Wash. Townsend	" "	2138	40 00
30	E. M. Wilcox	" "	2139	20 00
	H. U. Riggle	" "	2140	40 00
	Geo. Raymond	" "	2141	45 00
	W. S. Turner	" "	2142	60 00
	F. P. Stump	" "	2143	60 00
	F. W. Prentiss	" "	2144	8 33
	Total disbursements			$183783 69

STATEMENT III.

OHIO STATE UNIVERSITY.

Report of Treasurer of said institution to the Secretary of the Interior, of the amount received under act of congress of August 30th, 1890, in aid of colleges of agriculture and the mechanic arts, and of the disbursements thereof, to and including June 30, 1894.

Balance on hand July 1, 1893	$130 75
Date of receipt of installment for 1893-94, July 27, 1893.....Amount.	19,000 00
Total available for year ended June 30, 1894	$19,130 75
Disbursements thereof for and during the year ended June 30, 1894:	
Agriculture, as per schedule A	3,186 76
Mechanic Arts, as per schedule B	11,887 76
English Language, as per schedule C	380 00
Mathematical Science, as per schedule D	545 00
Natural or Physical Sciences, as per schedule E	2,769 97
Economic Science, as per schedule F	315 00
Total expended during year	$19,084 49
Balance remaining unexpended July 1, 1894	46 26

I hereby certify that the above account is correct and true and, together with the schedules hereunto attached, truly represents the details of expenditures for the period and by the institution named, and that said expenditures were applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life and to the facilities for such instruction.

F. W. PRENTISS, *Treasurer.*

SCHEDULE A.

Disbursements for instruction in Agriculture and for facilities for such instruction, during the year ended June 30, 1894.

I. For instruction, viz.:	
For parts of salaries of instructors employed to teach the branches included under this head: Thos. F. Hunt, $225; W. R. Lazenby, $225; H. J. Detmers, $225; H. A. Weber, $225; F. P. Stump, $60; W. S. Turner, $60; W. C. Werner, $60; L. M. Bloomfield, $70	$1,150 00
II. For facilities, as follows:	
1. Apparatus	731 01
2. Machinery	204 08
3. Text-books and reference books	2 00
4. Stock and material	1,099 67
Total	$3,186 76

SCHEDULE B.

Disbursements for instruction in Mechanic Arts and for facilities for such instruction, during the year ended June 30, 1894.

I. For instruction, viz.:	
For parts of salaries of instructors employed to teach the branches included under this head: C. N. Brown, $225; S. W. Robinson, $225; A. L. Williston, $200; N. W. Lord, $200; F. W. Sperr, $200; Geo. B. Kauffman, $150; J. N. Bradford, $160; E. A. Kemmler, $120; F. J. Combs, $80; C. W. Weick, $80; W. A. Knight, $80; J. R. Taylor, $70; C. A. Dye, $60; E. A. Hitchcock, $120	$1,970 00
II. For facilities, as follows:	
1. Apparatus	2,118 78
2. Machinery	7,487 71
3. Text-books and reference books	.....
4. Stock and material	311 27
Total	$11,887 76

SCHEDULE C.

Disbursements for instruction in English Language and for facilities for such instruction, during the year ended June 30, 1894.

I. For instruction, viz.:	
For parts of salaries of instructors employed to teach the branches included under this head: Jas. Chalmers, $200; Jos. V. Denney, $180	$380 00
II. For facilities, as follows:	
1. Apparatus	.....
2. Machinery	.....
3. Text-books and reference books	.....
4. Stock and material	.....
Total	$380 00

SCHEDULE D.

Disbursements for instruction in Mathematical Science and for facilities for such instruction, during the year ended June 30, 1894.

I. For instruction, viz.:	
For parts of salaries of instructors employed to teach the branches included under this head: R. D. Bohannan, $225; Geo. W. McCoard, $160; Henry C. Lord, $90; C. L. Arnold, $70.	$545 00
II. For facilities, as follows:	
1. Apparatus	.....
2. Machinery	.....
3. Text-books and reference-books	.....
4. Stock and material	.....
Total	$545 00

SCHEDULE E.

Disbursements for instruction in Natural and Physical Science and for facilities for such instruction, during the year ended June 30, 1894.

I. For instruction, viz.:	
For parts of salaries of instructors employed to teach the branches included under this head: S. A. Norton, $225; B. F. Thomas, $225; Edw. Orton, $225; D. S. Kellicott, $225; A. M. Bleile, $225; W. A. Kellerman, $225; F. C. Caldwell, $120; Jas. E. Boyd, $80; W. McPherson, $150; F. Bascom, $80; C. B. Morrey, 70	$1,850 00
II. For facilities, as follows:	
1. Apparatus	362 76
2. Machinery	
3. Text-books and reference-books	
4. Stock and material	557 21
Total	$2,769 97

SCHEDULE F.

Disbursements for instruction in Economic Science and for facilities for such instruction, during the year ended June 30, 1894.

I. For instruction, viz.:	
For parts of salaries of instructors employed to teach the branches included under this head: Geo. W. Knight, prof. hist. and pol. econ., $225; W. H. Siebert, asst. prof. history, $90.	$315 00
II. For facilities, as follows:	
1. Apparatus	
2. Machinery	
3. Text-books and reference books	
4. Stock and material	
Total	$315 00

STATEMENT IV.

STATEMENT VIRGINIA MILITARY LANDS.

Total receipts to June 30, 1893	$64,962 26	
Expenses incident to sales were	22,662 12	
Leaving net cash balance at above date		$42,300 14
Of this sum there has been paid to the credit of the Endowment Fund	$13,665 14	
And there has been expended in building and maintaining residences for the Professors, under act of April 15, 18	18,826 52	
		32,491 66
Leaving a balance June 30, 1893		$9,808 48

The above balance of June 30, 1894, is carried with and is a part of the current account.

STATEMENT V.

List of Employes and Compensation.

In compliance with section 7 of the *Organic Act*, passed by the legislature of Ohio, May 1, 1878, which requires the list of "the number of professors, officers, teachers and other employees, and the compensation of each, to be annually reported," I submit the following:

Employees.	Position.	Salary.
W. H. Scott	President	$3,000 00
Edward Orton	Professor geology	2,250 00
Sidney A. Norton	" chemistry	2,250 00
Stillman W. Robinson	" mechanical engineering	2,250 00
Wm. R. Lazenby	" horticulture and forestry	2,250 00
Josiah R. Smith	" Greek language and literature	2,250 00
Henry A. Weber	" agricultural chemistry	2,250 00
Benj. F. Thomas	" physics	2,250 00
Geo. W. Knight	" history and political science	2,250 00
H. J. Detmers	" veterinary surgery	2,250 00
R. Daniel Bohannan	" mathematics and astronomy	2,250 00
David S. Kellicott	" zoology and entomology	2,250 00
Ernst A. Eggers	" German language, literature	2,250 00
C. Newton Brown	" civil engineering	2,250 00
Albert M. Bleile	" anatomy and physiology	2,250 00
Wm. A. Kellerman	" botany	2,250 00
Thos. F. Hunt	" agriculture	2,250 00
Samuel C. Derby	" Latin language and literature	2,250 00
Nathaniel W. Lord	" mining engineering	2,000 00
A. N. Williston	Director of industrial department	2,000 00
F. W. Sperr	Asst. Prof. mining engineering	2,000 00
James Chalmers	Asso. Prof. Eng. language and literature	2,000 00
Geo. P. Coler	Asst. Prof. philosophy	1,800 00
Joseph V. Denney	Asso. Prof. rhetoric	1,800 00
Benj. L. Bowen	" romance languages	1,800 00
Geo. W. McCoard	Asst. Prof. mathematics	1,600 00
Jos. N. Bradford	" drawing and mechanical eng	1,600 00
Geo. B Kauffman	" pharmacy	1,500 00
Wm. McPherson	" general chemistry	1,500 00
E. A. Hitchcock	" mechanical engineering	1,200 00
E. A. Kemmler	Assistant in civil engineering	1,200 00
F. C. Caldwell	Asst. Prof. physics	1,200 00
Chas. W. Mesloh	Assistant in German	1,000 00
R. I. Fulton	Professor elocution and oratory	1,000 00
W. H. Siebert	Assistant in history and pol. science	900 00
H. C. Lord	" mathematics and astronomy	900 00
W. A. Knight	Foreman of machine shop	800 00
W. S. Elden	Assistant in French and Latin	800 00
F. J. Combs	" mechanical laboratory	800 00
Jas. E. Boyd	" physics	800 00
Chas. W. Weick	Foreman carpenter and pattern shops	800 00
Olive B. Jones	Librarian	800 00
Florence Bascom	Assistant in geology	800 00
L. M. Bloomfield	" agricultural chemistry	700 00
C. L. Arnold	" mathematics	700 00
J. R. Taylor	" drawing	700 00
Chas. B. Morrey	" Latin and physiology	700 00
W. C. Werner	Asst. bot. and supt. greenhouse	600 00
Ernest Bradford	Storekeeper chemical laboratory	600 00
D. S. White	Assistant in veterinary surgery	600 00
Clair A. Dye	" chemistry and pharmacy	600 00
Wm. F. Hunter	Dean of law school	600 00
Herbert Scott	President's clerk	500 00

STATEMENT V—Concluded.

Employees.	Position.	Salary.
Horace L. Wilgus	Secretary of law school	$300 00
C. W. Foulk	Assistant in mining department	150 00
J. H. McGregor	" zoology	150 00
T. E. French	" drawing	150 00
N. H. Brown	" physics	150 00
Alexis Cope	Secretary	2,135 25
W. C. McCracken	Engineer	1,200 00
Franklin P. Stump	Superintendent farm	720 00
W. S. Turner	Horticultural gardener	720 00
Charles Low	Fireman	540 00
Geo. Raymond	Night watchman	540 00
James Kelly	Lawn keeper	480 00
Washington Townsend	Janitor	480 00
Henry Garnes	Messenger	100 00

COLUMBUS, OHIO, *Sept. 25, 1894.*

To the Board of Trustees of the Ohio State University:

The undersigned, the Executive Committee, have, in obedience to your instructions, examined the accounts and vouchers of F. W. Prentiss, the Treasurer of the University for the period from June 30, 1893, to July 1, 1894, and carefully compared them with the records and vouchers in possession of the Secretary, and hereby certify that the report of the Treasurer submitted to the Board for the period named, which is the last fiscal year, is correct.

LUCIUS B. WING,
T. J. GODFREY,
JOHN B. SCHUELER,
Executive Committee.

CATALOGUE

OF THE

OHIO STATE UNIVERSITY

FOR

1894-1895

Contents.

Calendar.

1894

JULY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	...	...	...	...
...	...	...	...	...	...	...

AUGUST

...	...	...	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	...
...	...	...	...	...	...	...

SEPTEMBER

...	...	...	...	...	...	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	...	...	...	...	...	...

OCTOBER

...	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
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NOVEMBER

...	...	...	...	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	...
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DECEMBER

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16	17	18	19	20	21	22
23	24	25	26	27	28	29
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1895

JANUARY

S	M	T	W	T	F	S
...	...	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
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27	28	29	30	31	...	...
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FEBRUARY

...	...	...	...	...	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	...	...
...	...	..	...	...	...	...

MARCH

...	...	...	...	...	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	...	...	...	...	...	...

APRIL

...	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	...	...	...	...
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1895

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7	8	9	10	11	12	13
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4	5	6	7	8	9	10
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8	9	10	11	12	13	14
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1	2	3	4	5	6	7
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2	3	4	5	6	7	8
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16	17	18	19	20	21	22
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8	9	10	11	12	13	14
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7	8	9	10	11	12	13
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Announcements.

1895.

Second Term begins	Wednesday,	January 2.
University Day	Friday,	February 22.
Second Term ends	Friday,	March 22.
Third Term begins	Monday,	March 25.
Senior Vacation begins	Saturday,	May 18.
Baccalaureate Sermon	Sunday,	June 9.
Entrance Examinations, 8:15 A. M.	Monday,	June 10.
	Tuesday,	June 11
Class Day	Monday,	June 10.
Alumni Day	Tuesday,	June 11.
COMMENCEMENT	Wednesday,	June 12.
Entrance Examinations, 8:15 A. M.	Monday,	September 9.
	Tuesday,	September 10.
First Term begins: Registration Day	Wednesday,	September 11.
Thanksgiving Recess	Thursday,	November 28.
	Friday,	November 29.
First Term ends	Wednesday,	December 18.

1896.

Second Term begins	Wednesday,	January 8.
Second Term ends	Friday,	March 27.
Third Term begins	Monday,	March 30.
COMMENCEMENT	Wednesday,	June 17.

Board of Trustees.

		Term Expires.
LUCIUS B. WING	Newark	May 13, 1895.
THOMAS J. GODFREY	Celina	" 1896.
JOHN B. SCHUELLER	Columbus	" 1897.
ROSS J. ALEXANDER	Bridgeport	" 1898.
WILLIAM I. CHAMBERLAIN	Hudson	" 1899.
DAVID M. MASSIE	Chillicothe	" 1900.
JOHN T. MACK	Sandusky	" 1901.

OFFICERS OF THE BOARD.

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JOHN T. MACK	*Vice President.*
ALEXIS COPE, 170 North High Street	*Secretary.*
FRED. W. PRENTISS	*Treasurer.*

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J. B. SCHUELLER,	L. B. WING,	D. M. MASSIE,
T. J. GODFREY.	JOHN T. MACK.	R. J. ALEXANDER.

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THOMAS J. GODFREY, WM. I. CHAMBERLAIN, JOHN T. MACK.

Members of the Faculties.

*INSTRUCTORS AND OFFICERS.

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PRESIDENT, and Professor of Philosophy.

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Professor of Geology.

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Professor of General and Applied Chemistry.

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Professor *Emeritus* of Agriculture.

†STILLMAN W. ROBINSON, C. E., 1353 Highland Street.
Professor of Mechanical Engineering.

NATHANIEL W. LORD, E. M., 1175 Highland Street.
Professor of Mining and Metallurgy.

SAMUEL CARROLL DERBY, M. A., 93 Fifteenth Avenue.
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Professor of the Greek Language and Literature.

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Professor of Agricultural Chemistry.

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Professor of Physics.

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Professor of History and Political Science, and Professor of Constitutional Law in the School of Law.

HENRY J. DETMERS, M. V. D., 1315 Neil Avenue.
Professor of Veterinary Surgery.

ROSSER DANIEL BOHANNAN, B. Sc., C. E., E. M., 16th and Indianola Avenues.
Professor of Mathematics and Astronomy.

*The names of Professors and Associate Professors (including Director of the Industrial Department, Director of the Department of Clayworking and Ceramics, and Librarian) Professors in the School of Law, Assistant Professors, Lecturers and Assistants, are placed in their appropriate groups in the order of appointment to present rank and length of service in the University.

*† Absent on leave.

DAVID SIMONS KELLICOTT, PH. D., 1332 Highland Street.
Professor of Zoology and Entomology.

C. NEWTON BROWN, C. E., 1343 Forsyth Avenue.
Professor of Civil Engineering.

ERNST AUGUST EGGERS, 644 Franklin Avenue.
Professor of the German Language and Literature.

ALBERT M. BLEILE, M. D., 218 King Avenue.
Professor of Anatomy and Physiology.

EUGENE T. WILSON, 2d Lieut. 1st Artillery, U. S. A., 281 East Broad Street.
Professor of Military Science and Tactics.

WILLIAM A. KELLERMAN, PH. D., 175 West Eleventh Avenue.
Professor of Botany.

THOMAS FORSYTH HUNT, M. Sc., 188 West Tenth Avenue.
Professor of Agriculture.

ARTHUR LYMAN WILLISTON, S. B., 652 Franklin Avenue.
Director of the Industrial Department.

REV. ALLEN CAMPBELL BARROWS, A. M., D. D., 54 West Second Avenue.
Professor of English Literature.

GEORGE BEECHER KAUFFMAN, B. Sc., 66 Twenty-First Street.
Professor of Pharmacy.

BENJAMIN LESTER BOWEN, PH. D., 21 Douglass Street.
Professor of the Romance Languages and Literatures.

JOSEPH VILLIERS DENNEY, B. A., Sixteenth and Indianola Avenues.
Professor of Rhetoric and Secretary of the University Faculty.

EDWARD ORTON, JR., E. M., 36 North Monroe Avenue.
Director of the Department of Clayworking and Ceramics.

JOSEPH NELSON BRADFORD, M. E., 54 West Tenth Avenue.
Associate Professor of Drawing.

OLIVE JONES, 71 West Eleventh Avenue.
Librarian.

ROBERT IRVING FULTON, A. M., Delaware, O.
Lecturer on Elocution and Oratory.

WILLIAM F. HUNTER, { 1032 East Town Street. / 18 Board of Trade.
Dean of the School of Law, Professor of the Law of Sales, Bailments, Evidence, Wills, Probate Practice, Construction of Contracts and Judge of Moot Courts.

GEORGE K. NASH, B. A., { 43 Jefferson Avenue. / 36 Board of Trade.
Professor of the Law of Torts.

DAVID F. PUGH, { 1320 Highland Street. / Court House.
Professor of Equity Jurisprudence.

L. N. ABERNETHY, Circleville.
Professor of Criminal Law, the Law of Extraordinary Legal Remedies, and Circuit and Supreme Court Practice.

JAMES H. COLLINS, { 57 Lexington Avenue. / Y. M. C. A. Building.
Professor of the Law of Corporations and Federal Practice.

ORLANDO W. ALDRICH, LL. D., D. C. L., 101 North High Street.
Professor of the Law of Real Property and Mortgages, Office Practice, Conveyancing, and the Study of Cases.

RUTHERFORD H. PLATT, B. A., LL. B. { 414 East Broad Street. / 13½ East State Street.
Professor of the Law of Pleading and Practice.

J. PAUL JONES, B. A., { 1194 East Town Street. / 23½ East State Street.
Professor of the Law of Contracts.

EMILIUS OVIATT RANDALL, B. PH., LL. M., { 1025 East Oak Street. / 35½ North High Street.
Professor of Commercial Law.

HORACE LAFAYETTE WILGUS, M. Sc., { 81 West Frambes Avenue. / 5 North High Street.
Professor of Elementary Law and Secretary of the Faculty of the School of Law

GEORGE W. McCOARD, M. A., 1322 Neil Avenue.
Assistant Professor of Mathematics.

†FREDERICK W. SPERR, E. M., 1461 Worthington Street.
Assistant Professor of Mining Engineering.

WILBUR HENRY SIEBERT, M. A., 57 West Tenth Avenue.
Assistant Professor of History.

WILLIAM McPHERSON, JR., M. Sc., Fifteenth and Indianola Avenues.
Assistant Professor of General Chemistry.

FRANCIS CARY CALDWELL, B. A., M. E., 191 King Avenue.
Assistant Professor of Physics.

HENRY CURWEN LORD, B. Sc., 169 King Avenue.
Assistant Professor of Astronomy and Mathematics.

*FRANK A. RAY, E. M., The Normandie.
Assistant Professor of Mining Engineering.

DEWITT GOODRICH, Climbing Hill, Iowa.
Assistant Professor of Dairy Husbandry.

B. B HERRICK. Wellington, O.
Lecturer on Cheese-Making.

WILLIAM C. McCRACKEN, 91 West Frambes Avenue.
Lecturer on Care of Boiler and Engine.

WARREN K. MOOREHEAD, 1080 Madison Avenue.
Curator of the Archæological Collections.

CHARLES WALTER MESLOH, B. A., 9 Lyndon Block, Fifth Ave. and High St.
Assistant in German.

JOSEPH RUSSELL TAYLOR, B. A., 191 King Avenue.
Assistant in Rhetoric.

CHARLES LINCOLN ARNOLD, M. Sc., 239 West Tenth Avenue.
Assistant in Mathematics.

CHARLES B. MORREY, B. A., University Grounds.
Assistant in Physiology.

CLAIR ALBERT DYE, G. PH., 135 King Avenue.
Assistant in Pharmacy.

LLOYD MORRIS BLOOMFIELD, B. AGR., University Grounds.
Assistant in Agricultural Chemistry.

FRANK J. COMBS, 1173 Franklin Avenue.
Assistant in the Industrial Department and Foreman of the Forge Room.

EDWARD A. KEMMLER, C. E., 888 City Park Avenue.
Assistant in Civil Engineering.

---

†Resigned.
*Assumed duties October 15, 1894.

JAMES ELLSWORTH BOYD, B. Sc. — 159 West Frambes Avenue.
Assistant in Physics.

PAUL FISCHER, B. AGR., D. V. M., — 525 East Main Street.
Assistant in Veterinary Medicine.

EMBURY A. HITCHCOCK, M. E., — 191 King Avenue.
Assistant in Mechanical Engineering.

FLORENCE BASCOM PH. D., — Fifteenth and Indianola Avenues.
Assistant in Geology.

CHARLES W. WEICK, — 30 East Ninth Avenue.
Assistant in the Industrial Department and Foreman of the Carpenter and Pattern Shops.

WILLIAM A. KNIGHT, — 206 West Lane Avenue.
Assistant in the Industrial Department and Foreman of the Machine Shops.

DAVID S. WHITE, D. V. M., — 1349 Hunter Street.
Assistant in Veterinary Medicine.

FRANKLIN P. STUMP, B. AGR. — University Grounds.
Assistant in Agriculture and Foreman of the Farm.

THOMAS EWING FRENCH, — Worthington Street.
Assistant in Drawing.

NEWTON HENRY BROWN, M. E., — 114 Norwich Avenue.
Assistant in Physics

CHARLES ROGER WATSON, A. B., — 106 North Grant Avenue.
Assistant in French and Latin.

PITT GORDON KNOWLTON, M. A., — 448 West Sixth Avenue.
Assistant in Philosophy.

JAMES ALVA WILGUS, A. M., — 1573 Summit Street.
Assistant in History.

JOSEPH C. RITCHEY, B. Sc. — University Grounds.
Assistant in General Chemistry.

THOMAS KENYON LEWIS, B. Sc., — 32 West Ninth Avenue.
Assistant in Drawing.

OSCAR J. BAILEY, — Tacoma, O.
Assistant in Butter Making.

HARRIET TOWNSHEND, — University Grounds.
Assistant Librarian.

KARL DALE SWARTZEL, M. Sc., — 57 West Frambes Avenue.
Fellow and Assistant in Mathematics.

JAMES HOWARD McGREGOR, B. Sc., — 234 West Tenth Avenue.
Fellow and Assistant in Zoology and Entomology.

*CHARLES WILLIAM FOULK, B. A., — University Grounds.
Fellow and Assistant in Mining and Metallurgy.

CHARLES WILLIAM DAVIS, E. M., — 204 West Fourth Avenue.
Fellow and Assistant in Mining and Metallurgy.

STATE GEOLOGIST.

PROFESSOR EDWARD ORTON.

STATE SEALER OF WEIGHTS AND MEASURES.

THE PROFESSOR OF PHYSICS, *Ex Officio.*

* Resigned.

Ohio State University.

THE UNIVERSITY AND THE STATE.

Under an act of Congress passed July 2, 1862, the State of Ohio received from the United States a large grant of the public lands for the purpose of establishing a "college, where the leading objects shall be without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." In accordance with this act, the Ohio State University was founded by the State as a public institution of learning. The governing body of the institution is a Board of Trustees, appointed by the Governor of the State for terms of seven years, as provided in the law organizing the University. The original endowment has been supplemented, and the objects of the University promoted, by a permanent annual grant from the United States, under an act of 1890; by special appropriations of the General Assembly; and lastly, in 1891, by a permanent annual grant from the State. In accordance with the spirit of the law under which it is organized, the University aims to furnish ample facilities for education in the liberal and industrial arts, the sciences and the languages, and for thorough technical and professional study of agriculture, engineering in its various departments, veterinary medicine, pharmacy and law. Through the aid which has been received from the United States and from the State, it is enabled to offer its privileges, with a slight charge for incidental expenses, to all persons, of either sex, who are qualified for admission.

ORGANIZATION OF THE UNIVERSITY.

The University comprises the Collegiate Department, the School of Law, and a Preparatory Department.

The Collegiate Department embraces the following schools: Arts and Philosophy, Science, Agriculture, Engineering, Pharmacy and Veterinary Medicine. Each School is under the direction of a standing committee of the Faculty, having power to act in all matters pertaining to the work of students in the School, in the transfer of students from one School to another, and in matters of minor discipline.

LOCATION OF THE UNIVERSITY.

The University is situated within the corporate limits of the city of Columbus, two miles north of the Union Depot and about three miles from the State Capitol. The University grounds consist of three hundred and thirty acres, bounded east

and west by High Street and the Olentangy River, respectively. The western portion, about two hundred acres, is devoted to agricultural and horticultural purposes, and is under the management of the Agricultural Department of the University. The eastern portion is occupied by the principal University buildings, campus, athletic and drill grounds, a park-like meadow, and a few acres of primitive forest.

The grounds are laid out with care, are ornamented with trees, shrubs, and flower beds, and are so managed as to illustrate the instruction in Botany, Horticulture, Forestry, Landscape Gardening, and Floriculture.

The University may be reached by either the North High Street or Neil Avenue electric cars. Those wishing to go to the principal buildings of the University or to the residences on the grounds, should take a High Street car going north. Those wishing to visit the Veterinary Hospital, Agricultural and Horticultural buildings, the Dormitories or the athletic field will find the Neil Avenue cars more convenient.

BUILDINGS.

UNIVERSITY HALL was completed in 1873 and was for some years the only building devoted to instruction. It is built of brick with stone trimmings. It is four stories high, exclusive of basement, two hundred and thirty-five feet long and the central portion is one hundred and nine feet wide. This building contains the President's office, the assembly room, the zoological museum, three halls for literary societies, besides class-rooms and laboratories for the Departments of Agriculture, Civil Engineering, French, German, Greek, History and Political Science, Latin, Philosophy, Physics, Physiology and Zoology.

MECHANICAL HALL was erected in 1879. The material is brick, and the dimensions ninety-three feet front and thirty-two in depth, with a wing eighty feet in length and thirty-two feet in depth. It contains a room fitted up with cases for the care of models, instruments of precision, etc., and a room for instruction in laboratory mechanics and draughting The remaining rooms contain the engines, hydraulic plant, testing machines, etc. The cost of the building and its equipment was about ten thousand dollars; but repeated and valuable additions have since been made to the outfit.

BOTANICAL HALL was provided for in 1883 by a State appropriation of fifteen thousand dollars. It is constructed of brick, and is fifty feet long by forty feet wide, with an attachment in the rear which is twenty-five feet square. The whole is two stories in height. The main room on the first floor is the lecture room of the Department of Botany. There are also an office, a store room, a dark room, a private laboratory, and a laboratory for Physiological Botany. On the second floor is the botanical museum room, the main laboratory and the assistant's laboratory. Connected with this building is a greenhouse containing two compartments, each of which is twenty-five feet wide, one being thirty and the other forty feet in length.

ELECTRICAL HALL was built in 1889. It is a two-story brick building about seventy-five feet long and forty-five feet wide. Sixty feet of the first floor forms the engine and dynamo room. The floor of this room is of asphalt, laid on a solid concrete foundation. On the second floor are a lecture room, thirty by forty feet, a photometric room, a library room, and three measurement rooms. The building and its outfit are valued at about sixteen thousand dollars, of which ten thousand was appropriated by the General Assembly, and the remainder was presented by various electric companies.

CHEMICAL HALL was completed during the summer of 1890, and is now occupied by the Departments of General Chemistry, Agricultural Chemistry, Mining and Metallurgy, and Pharmacy. The building and contents have cost about sixty-

two thousand dollars, which was appropriated by the State. It stands three hundred and twenty-five feet east of University Hall, and like that fronts the south. It is two stories in height, with a basement of about eleven feet. Its greatest length is one hundred and seventy-nine feet, and its depth, between the extreme points, one hundred and thirty-two feet. The depth of the main portion, exclusive of the wings, varies from sixty-three to more than seventy feet. It is built of pressed brick laid in red mortar. At the entrance is a large loggia, and beyond this is a vestibule opening into the main hall.

The Department of General Chemistry occupies the middle and western portion of the second floor. The main lecture room is thirty-seven by forty-two feet, and contains seating capacity for one hundred and fifty persons. The qualitative laboratory is about forty by fifty-eight feet, and contains desks for forty students. The quantitative laboratory contains desks for eighteen students. Besides these, there is a second lecture room accommodating forty persons, a room for the preparation of experiments, a balcony accessible both from the lecture room and the preparation room, two store rooms for supplies, a balance room, a room for working with foul gases, one for distilling water, one for spectroscopic work, one for rough work, one for books, a private laboratory, and an office.

The Department of Agricultural Chemistry occupies the middle portion of the first story, and the basement, and has a lecture room with seats for sixty students, a preparation room, a laboratory with desks for fifty-four students, a laboratory for organic analysis, a store room, a balance room, and a private laboratory.

The Department of Mining and Metallurgy occupies the eastern part of the building. In the basement are the smelting furnaces, the assay laboratory, a room for rough work, and store rooms for supplies. On the first floor is the lecture room of the professor in charge, twenty-five by twenty-six feet, with a seating capacity of forty, a laboratory with desks for sixteen students, a store room, a balance room, a private laboratory, and an office. On the second floor is the lecture room of the assistant professor, a draughting room, a room for instruments, and an office.

The Department of Pharmacy occupies the first floor and basement in the western end of the building, and has a lecture room twenty-two feet by thirty-six, providing for sixty students, a preparation room, a laboratory with desks for twenty-five students, a room for supplies, a balance room, a model drug store, and a private laboratory.

The Dairy Laboratory is located on the basement floor of Chemical Hall and consists of five rooms. The operating room is thirty-seven by fifty-five feet and is supplied with modern apparatus for the manufacture of butter and cheese according to several methods usually practiced. There is a cheese-curing room for the curing of ordinary cheese, and adjacent to it a small darkened curing room, suited for curing fancy cheese. There is a refrigerator room ten by fifteen feet and a locker room on the same side, supplied with lockers.

ORTON HALL. This building, recently completed at a cost of about $102,000, is designed for the permanent accommodation of the large geological collection of the University and for work and instruction in the Department of Geology. A portion of it is occupied by the library and reading room and by the lecture room of the Department of English Literature. The main front is about one hundred and fifty feet in length and the extreme depth about one hundred and thirty feet. The building is two stories in height, with a high basement, is built of brick and faced with sandstone, and is fireproof throughout. Some of the material was contributed by various quarries of the State of Ohio, and almost all of the finer varieties of Ohio building stone are represented in the columns, walls, and ceiling panels of the vestibule. At the right of the main entrance is the geological lecture room, and professor's private room; at the left is the library, reading room and

librarian's private room. The central and rear portion is occupied by the geological and paleontological museums. The petrographical laboratory is located on the second floor; in the basement a room is used for work in geographical modeling, the finished models being afterwards placed in the collection of such models in a room set apart for the purpose on the second floor. The basement accommodates also the museum of economic geology. A paleontological laboratory or working room is also provided, on the second floor.

The greater part of the basement of Orton Hall is occupied as a laboratory by the Department of Clayworking and Ceramics. This Department is also accommodated with a large room on the first floor for recitation and exhibition purposes. In the rear of Orton Hall is a small brick structure, used for the kilns of the Department of Clayworking and Ceramics.

The School of Law is provided with lecture rooms and library accommodations in Orton Hall.

HAYES HALL. This large building of pressed brick and brown sandstone was recently completed and equipped at a cost of about $70,000. It is devoted to instruction in Industrial Arts. The entire front of the building is one hundred and sixty-eight feet and the depth one hundred and forty-six feet, with two rear wings of one story thirty-six by forty-nine feet. The central portion is three stories high and the front wings, two stories each. On the first floor is a reading room, an office and two recitation rooms, besides the machine shop, the forge shop and the foundry. On the second floor are the carpenter and pattern shops and six large recitation rooms with private rooms annexed.

The Department of Drawing occupies the third floor, for instruction in mechanical and free-hand drawing and photography.

The Departments of Mathematics, Rhetoric and History are also provided with lecture and recitation rooms in Hayes Hall.

HORTICULTURAL HALL is a handsome two-story brick structure fronting the campus from the west. It contains recitation rooms and in-door laboratories of the Department of Horticulture and Forestry. An extensive greenhouse is attached. Near by is a frame building used by the Department of Agriculture as a store house for seeds and implements. There are also a frame farm residence, a barn for horses, a building for the dairy and several smaller buildings.

THE VETERINARY HOSPITAL contains on the first floor, a veterinary museum and library, a dispensary, and two private rooms for the persons in charge. On the second floor are a class room, a bacteriological laboratory, and a microscopical laboratory. The rear extension contains an operating hall thirty by thirty-three feet in size, and a room provided with stalls, cages, etc., for the care of animals under treatment.

THE NORTH DORMITORY is situated at the northern limit of Neil Avenue, and fronts Eleventh Avenue. It is at the terminus of the Neil Avenue electric railroad. It is a plain structure of brick, and affords accommodation for sixty-four students.

THE SOUTH DORMITORY stands near Neil Avenue within a few rods of the North Dormitory. It is also built of brick, and contains rooms for twenty students.

RESIDENCES. There are six dwelling houses upon the University campus. Four of these are brick and two are frame structures. One is occupied by the President of the University, three by professors, and another is leased to one of the fraternities for a chapter house.

LABORATORIES AND EQUIPMENT.

AGRICULTURE.

The equipment of this Department may be divided along three general lines; the plant, the museum, and the illustrative materials.

THE PLANT. This consists of a farm of about two hundred acres, a general farm barn, a horse barn, and several smaller buildings. The farm lies along the Olentangy river, and consists of both first and second bottom land. On this farm are grown general farm crops in the rotation deemed best suited to the circumstances of the Department. At present, a few experiments are conducted, the general idea being to conduct such experiments as will have the largest instructional value to the students who attend the School of Agriculture. The Ohio Agricultural Experiment Station continues to conduct here the elaborate fertilizer experiments with wheat, corn and oats, which it has been making on this farm during the past five years. Different species and varieties of farm crops are grown, to some extent for the purpose of class illustration and instruction, and it is expected considerably to enlarge this feature.

Specimens of the draft, coach and roadster type of horses are kept and used in the farm work. The Department manages a milk dairy, having a herd of about forty cows composed of pure-bred and gray Jerseys and shorthorns.

The general farm barn contains a well-arranged stable for forty cows; with underground drainage and sewage cistern, a milk cooling room, a silo, a root cellar, a work shop, with room for hay, grain and other food stuffs.

THE MUSEUM. This contains a large number of samples of farm products in various forms and their by-products; such as soils, grains, grasses, wools, cotton, forage plants and food stuffs. Milling and other processes are illustrated by samples of the various products of manufacture.

The museum contains Auzoux models, samples of tools and a considerable miscellaneous collection. The collections are intended primarily for student use and not for display.

ILLUSTRATIVE MATERIALS. These consist of charts, pictures and lantern slides showing results of experiments, representative and noted specimens of live stock, farm machinery, fences, buildings, etc. The Department has and uses constantly in the class room, a Beseler double oxygen-ether stereopticon. The collection of several hundred lantern slides for this purpose is constantly receiving additions.

THE AGRICULTURAL LIBRARY. While not considered as belonging specifically to this Department, there is in the general library a fairly good collection of books and periodicals devoted to agriculture, a large use of which is required of the student.

BOTANY.

The general Botanical Laboratory occupies a part of the second floor of Botanical Hall. It is 23x33 feet and is furnished with both movable and fixed tables. The latter are attached to the west and south walls near windows suitably shaded. Water, gas, and an evaporating hood are also provided. The laboratory is equipped with compound microscopes of the Baush and Lomb, the Leitz and other patterns, and accompanying each is a tray of tools and a case of reagents. There are more than thirty dissecting microscopes; also charts, and several minor pieces of apparatus for experiments in vegetable physiology. Three smaller rooms are also provided as laboratories for special work, as well as a dark room for photography. Other facilities for the illustration of the courses in botany, and for practical training in the same, are: a general herbarium including flowering plants, ferns mosses, fungi and algae; a state herbarium, a collection of fruits and seeds, valuable tim-

bers, woods, grasses, and various economic products of the vegetable kingdom; ornamental grounds and woodland, planted with a large variety of evergreen and deciduous trees and shrubs; and a greenhouse with a fair collection of native and exotic plants. See also MUSEUMS—*The Botanical Museum;* and BUILDINGS—*Botanical Hall.*

CHEMISTRY.

The laboratories of the Department accommodate two hundred and ten students. The general lecture room is large and well lighted, and all needed facilities are provided for the full experimental illustration of the lecture courses. The Department is generously supplied with the best apparatus and materials for both lecture and laboratory work, and has also a growing collection of specimens illustrating the application of chemistry to the arts. See also BUILDINGS—*Chemical Hall.*

CIVIL ENGINEERING.

The facilities provided for the illustration of the courses in civil engineering and for practical training are as follows: One high grade and three ordinary transits, three leveling instruments, solar compass, prismatic compass, improved telescope compass, Abney hand level, level and stadia rods, sight poles, chains, tapes; twenty-six improved drawing tables with 30″ by 36″ top; Schroeder's models in stereotomy and roof trusses; large set of models of wooden joints; collection of photographs of bridges both when finished and in course of erection; collections of strain sheets and shop drawings of bridges, new improved cement testing machine and outfit for making all kinds of cement tests; stone mason's tools for working models out of plaster blocks; magic lantern and slides; calculating machines; sets of drawing instruments; blue-print room with outfit; set of tracings of standard structures from which each student makes a set of blue-prints. The equipment is growing each year by the addition of materials purchased, presented, or made by students of the Department.

CLAYWORKING AND CERAMICS.

The University is the first, and at this time, the only institution of the United States offering special facilities for the study of clays, clay-working, and the chemical technology of the ceramic art. The facilities of the Department comprise, 1st, A convenient chemical laboratory, specially designed and equipped for the analysis and decomposition of silicates. Provision has been made for the use of hydrofluoric acid with safety and the platinum ware has been made to order with this purpose in view. 2d, A complete mechanical outfit for the preparation of clays for pottery manufacture and the production of the ware itself, of any grade from earthen wares to porcelain. The machinery is of the latest types and comprises all important varieties in use for grinding, tempering, washing, filtering and molding. 3d, A similar plant for the manufacture of brick, tiles, pipes and hollow goods. The machinery here is of full size and samples up to a ton in weight, can be received and transformed into the finished articles by any or all of the standard methods in commercial use. The power for this purpose is derived from a fine electric motor, driven from the University power plant. 4th, A kiln house, equipped with a kiln in which several hundred bricks, or an equivalent quantity of sewerpipe, stoneware or pottery can be burnt. The fuel is intended to be coke, except in special cases, where the fuel available for burning clay wares is to be made the subject of test. There is also provided a crucible melting furnace, a muffle furnace for testing glazes, etc., a recuperative pottery furnace for burning in decora-

tions and a regenerative furnace for testing fire-brick and refractory mixtures. These furnaces are fired with gasoline gas and air blast. 5th, A ceramic museum containing a fine collection of American pottery and clay products of every class, is in process of installation. 6th, A library of the best literature on the subject, mainly German, but containing a few English and French works, and the trade periodicals. See also BUILDINGS—*Orton Hall.*

DRAWING.

The Department occupies the entire third floor of Hayes Hall and is provided with the following equipment for the illustration of the work in drawing and for practical training in the same. For freehand drawing; flat and shaded copies in pencil and charcoal; wooden models of geometric forms; plaster casts of ornaments, flowers, fruit and the antique; easels and drawing tables for pen and ink drawing and for water-color and oil painting; a well selected line of work from artists of recognized ability. For mechanical drawing: O. S. U. improved drawing tables (30″ x 36″ tops), a set of the celebrated Schroeder models, a collection of shop drawings and facilities for blue printing. For photography: a well arranged and equipped dark room, printing outfits, copying camera, four view cameras, lenses of long and short focus, flash lamp and a shutter for instantaneous photography. In addition to the above, the library contains a well chosen collection of books pertaining to the work of the Department. See also BUILDINGS—*Hayes Hall.*

GEOLOGY.

The University is able to present unusual advantages for the study of geology. By an act of the legislature it has been put in possession of all the collections made by the late geological survey, and these collections have been supplemented by valuable additions of fossils and minerals from various sources. The State collection embraces a very complete representation of every geological formation shown in Ohio. In its new and ample quarters the Department offers exceptionally good opportunities for work in the lithological, petrographical and modeling laboratories. See also MUSEUMS—*The Geological Museum;* and BUILDINGS—*Orton Hall.*

HORTICULTURE AND FORESTRY.

Among the facilities provided for the illustration of the courses in horticulture, and for practical training in the same, are: (1) a collection of horticultural tools for budding, grafting, pruning, etc.; (2) an orchard, containing well selected varieties of the apple, pear, cherry, plum and quince; (3) a small vineyard, containing numerous varieties of the grape; (4) a garden of small fruits, containing all the best varieties of the strawberry, raspberry, blackberry, currant and gooseberry; (5) a vegetable garden with forcing houses, cold frames, experimental plats, conveniences for irrigation, etc.; (6) small nursery and forest tree plantations, with practice rows for budding, grafting, pruning and training; (7) ornamental grounds and woodland, planted with a large variety of evergreen and deciduous trees and shrubs; (8) a greenhouse, with a fair collection of native and exotic plants; (9) a collection of preserved natural specimens, and models of fruits, seeds, woods, etc.; (10) a laboratory fairly well equipped with microscopes, balances, charts, and other appliances for study and research. See also MUSEUMS—*The Botanical Museum;* and BUILDINGS—*Horticultural Hall.*

MECHANICAL ENGINEERING.

The greater portion of Mechanical Hall is devoted to laboratory purposes, only one of the six rooms being used exclusively for lectures and recitations, while one of the remaining five is used for a museum and instrument room containing a cabinet of models, accurate instruments for measuring and testing purposes and a valuable collection of pictures presented by some of the leading manufacturers of the country.

The laboratory embraces appliances for experimental testing of the resistance of materials; dynamometric measurement of power; lubricant testing; experiments in the flow of fluids and movement of air by power blowers and ventilating fans; engine testing; pressure gauge testing and standardizing; calibration of steam engine indicator springs, and a complete equipment for hydraulic testing.

Among the appliances are a Thurston oil tester; a Riehle testing machine; dynamometers; a complete set of Westinghouse compressed air apparatus; ventilating fan; power blower; 60 H. P. McEwen tandem compound engine, connected to a Deane jet condenser; 100 Buckeye engine; a pair of steam engines 20 and 30 H. P., connected to a Wheeler surface condenser and Blake vacuum pump and so arranged as to work duplex, compound, condensing or non-condensing; steam separators; injectors; calorimeters and apparatus for testing steampipe covering. The equipment for hydraulic testing consists of a two-foot standpipe for 300 feet head; a Leffel turbine; Pelton impulse wheel; Rifes hydraulic engine; Roberts water-motor; pulsometer; 40 H. P. centrifugal pump; two water bays of 2,500 gallons capacity each; three steam pumps of the Laidlaw-Dunn-Gordon Co., Davidson and Blakeslee makes; Ericsson and Rider hot-air pumping engines; wiers; weighing tanks, etc. All of the engines are fitted up for indicator work. In the boiler houses are a Babcock and Wilcox boiler of 500 horse power, and a tubular boiler of 30 horse power, either of which serves for experiments on boilers.

Those who have generously made gifts to the equipment of the Department are as follows: The J. H. McEwen Manufacturing Co., Deane Steam Pump Co., Westinghouse Air Brake Co., Huyett & Smith, Fairbanks & Co., D'Este & Seeley Co., Peuberthy Injector Co., William Sellers Co., Hancock Inspirator Co., Hill Clutch Co., Geo. J. Roberts & Co., Laidlaw-Dunn-Gordon Co., M. T. Davidson, and the Blakeslee Pump Co.

The mechanical laboratory virtually embraces much more than that mentioned above as there are steam and gas transmission pipes in tunnels for service with the various buildings of the institution, fitted with attachments for conducting experimental tests.

Trips are made also to the manufacturing establishments of the city, where numerous steam and other plants are available for expert testing. See also BUILDINGS—*Mechanical Hall.*

METALLURGY AND MINING ENGINEERING.

The draughting room is large, well lighted and provided with a desk for each student. A workshop in the attic is fitted with tools for making models, and for experiments in ventilation. The metallurgical laboratory has all the appliances for the most modern methods of technical analysis as practiced in iron and steel laboratories, including gas analysis. A furnace room in the basement is fitted for gold and silver assaying, with improved muffle and crucible furnaces.

The lecture room in metallurgy has arrangements for projecting photographs of machines, mines, and furnaces, for class illustration, and there is a large collection of such views. There is a photographic room with blue-printing facilities, where

students learn to make copies of the drawings used in illustrating the lectures.

A collection of minerals and rocks with a large set of rock sections is provided for illustrating the mineralogy, as well as sets of blow-pipe apparatus for the students in determinative mineralogy. See also BUILDINGS—*Chemical Hall;* and MUSEUMS—*The Geological Museum.*

PHARMACY.

The facilities provided for illustration of this work and for practical training are as follows: The apartments assigned to this work occupy the west end of Chemical Hall, first floor and basement. The lecture room will accommodate sixty students, and is provided with a large lecture table and supplied with gas and water, and other conveniences for experiment. About the walls are arranged cases in which are exhibited elegant and costly chemicals, rare and curious drugs, elegant pharmaceuticals and so on. Adjoining this room is the preparation room and store room, where the supplies and apparatus and material are kept, and where the apparatus for experiment and illustration before classes is prepared. Also adjoining this room is the professor's private laboratory. The main laboratory has desks for thirty-five students, each one provided with gas and water, and sufficient storage space for material and apparatus. The laboratory is furnished with apparatus for distilling and reclaiming, with mills, balances, drying closets, steam vaporizers, hoods and other special apparatus for pharmaceutical work. Opening into the laboratory is the drug store. This drug store is complete, and is in itself a cabinet of officinal drugs, and all preparations thereof. It is provided with a prescription desk and all apparatus adapted for training in prescription work. Adjoining the laboratory is the reading room, where are kept the various pharmaceutical journals, the dispensatories, and many books of reference. Also adjoining the main laboratory is the balance room, which is well provided with analytical balances, specific gravity balances and microscope, all of which are intended for higher pharmaceutical work.

In the reading room is also a cabinet of crude drugs, which have been classified and numbered, but bear no name. This cabinet is adapted for the study of pharmacognosy.

In addition to the foregoing equipment, the Department is possessed of an extensive range of apparatus, by means of which any branch of work in pharmacy can be successfully pursued. The Department is complete in all its details, and affords unexcelled opportunity for the study of pharmacy. See also BUILDINGS—*Chemical Hall.*

PHYSICS AND ELECTRICAL ENGINEERING.

The Department has an excellent equipment of apparatus, to which additions are constantly being made. The apparatus includes a large collection of pieces for illustration of the general lecture room work, but is principally chosen for accurate measurement in the laboratory. A set of standards of length, capacity and mass sent under the act of Congress supplying such sets to the several agricultural colleges, is in the possession of the Department. The pieces are copies of the United States standards made by the Coast Survey at Washington.

Among the principal pieces of apparatus are a dividing machine by Fauth & Co.; chronometers by Parkinson & Frodsham, and by Negus, the latter a break circuit; a chronograph by Fauth & Co.; a Hipp's chronoscope; cathetometers by Salleron and by the Geneva Society, the latter an exceptionally fine instrument; Regnault's apparatus for vapor tension, for expansion of gases, and for specific heat; Melloni-Tyndall apparatus for radiant heat; standard thermometers by Baudin and

others; Rutherford & Rowland diffraction gratings; Rowland's spectrum photographs; spectroscopes by Browning, Apps and others; Salleron's complete apparatus for projections in polarized light; lanterns for projections by the lime light and the arc light; a variety of sound apparatus from Koenig; portable and quadrant electrometers; Thomson galvanometers of high and low resistance; Thomson current and potential galvanometers; Weidemann, Kohlrausch and other galvanometers; standard resistance coils, with Cavendish laboratory certificate; several sets of resistance coils and bridges; a Kew magnetometer; a gas engine; and the State photometric apparatus.

The electrical laboratory affords excellent facilities for experimental and practical work with dynamo machinery. Machines of the leading makes are provided for incandescent lighting by continuous and by alternating currents, aggregating a capacity of about two thousand sixteen-candle power lamps. Machines for arc lighting, constant potential and constant current motors, Lord Kelvin's electric balances for standardizing galvanometers, Siemens's electro-dynamometers; Weston and other ammeters, Cardew and Weston voltmeters, Deprez and D'Arsonval galvanometers, photometers, steam engine indicators, Prony brakes, are provided, and enable students to carry out a wide range of experimental work.

Under the laws of Ohio, the professor of physics is *ex officio* State Sealer of Weights and Measures, and all of the standard weights, measures and balances received from the United States government are in the rooms of the Department in the custody of the professor of physics.

An electrical power plant has been installed for the purpose of supplying current for electric lighting and for motors applied to various uses in the several buildings of the University. A 100 H. P. engine in the mechanical laboratory drives a Thomson-Houston multipolar 500 volt generator for the power circuits, and a Westinghouse alternating current generator for the lighting circuits. These circuits extend to Chemical Hall, Hayes Hall, Orton Hall, Electrical Hall, University Hall, and to the farm. The currents are used in driving the ventilating fans, the various machinery, and in electric lighting. The wiring of the buildings and of the circuits in the tunnels was planned and carried out by students of the Electrical Engineering Course. The power plant affords valuable opportunity for experimental work and illustrates the tendency of modern engineering practice.

To this may be added, as a part of the facilities afforded students, the valuable opportunities given by the electric companies of Columbus. The Columbus Electric Light and Power Co., using the Thomson-Houston system for arc and incandescent lighting and the Columbus Edison Company, using the Edison system of lighting, generously allow us not only to inspect their works, but also to experiment freely with their machinery and circuits. See also BUILDINGS—*Electrical Hall.*

PHYSIOLOGY.

The facilities provided for the study of anatomy, bacteriology, histology and physiology are excellent. The laboratory is supplied with skeletons, papier-mache manikin, and many models, including models of the eye, ear, larynx, etc. The apparatus of the Department for work in bacteriology and physiology is of the best and most approved construction, and is adapted to the accurate investigation of bacterial forms, as well as to the thorough performance of the fundamental physiological experiments. Myographs, spectroscopes, microscopes and the necessary chemical outfit are also provided. For work in histology the equipment includes twenty-four individual tables for student experiments, each table being supplied with a good microscope, microscopical accessories, microscopical reagents, and for advanced work, the needed apparatus for instruction in the various methods of

hardening, staining, imbedding, section-cutting and injection. The laboratory also has excellent microtomes, imbedding baths, and other essentials of a histological outfit. The equipment of the laboratory makes it possible to offer a large range of work for the choice of students in advanced courses.

SHOP WORK.

The larger part of Hayes Hall is devoted to shop purposes, where instruction is given in the principles and practical details of the various branches of industry. The carpenter shop is equipped with twenty-five benches with full sets of tools for each, besides a large number of special tools; and in the pattern shop there are twenty pattern-makers' lathes with the necessary turning and pattern-makers' tools, besides a double revolving circular saw, a scroll saw, a hand planer, a trimmer and a power grindstone. There are, in the forge shop, twenty-one stationary forges, with anvils and tools, one portable handforge, a blacksmith's drill and a punch shear and bar cutter. The blast for the forges is furnished by a power fan and the smoke is removed by an exhaust fan, both of which are driven by an electric motor. The foundry contains a cupola, a brass furnace and blowers, a moulding floor with sand flasks, ladles, etc. The machine shop, which is driven by a twenty-five horse-power electric motor, is equipped with the following: twenty-eight benches and complete sets of tools for vise work, seven speed lathes, fifteen engine lathes, two upright drills, a planer, a shaper, a milling machine, grinding machines for grinding both plane and cylindrical surfaces, tool grinders, emery wheels, etc. All of this machinery is furnished with full sets of tools, making the equipment as complete as possible. See also BUILDINGS—*Hayes Hall.*

VETERINARY MEDICINE.

The hospital affords excellent facilities for the care of patients, and for the study and treatment of their ailments. It contains eight stalls, a loose box, a large operating hall, and accommodations for the treatment of dogs.

The front part of the building contains a lecture room, a library, an anatomical and pathological museum, a bacteriological laboratory, a room for microscopy and photomicrography, a dark room, a dispensary, and an office. The museum contains two skeletons of the horse, one of a cow, one of a camel, and one of an ostrich, all prepared by students. The skeletons of the lion and of the tapir have also been prepared. The museum has a growing collection of pathological preparations. The library contains a choice collection of books and the leading periodicals in veterinary science.

The equipment of the Department, for surgical work, is unsurpassed. It includes sets of instruments of the latest and most approved patterns, and by the best makers.

Better facilities and more means of instruction are constantly added. The bacteriological laboratory, in particular, is supplied with apparatus of the most modern and improved construction. The microscopes and microscopic apparatus are all first class and adapted not only to the most accurate work in bacteriology but also to a very wide range of work in general, including photomicrography. The microscopes and accessories are all the products of the most renowned American makers, R. B. Tolles, H. R. Spencer, Bausch & Lomb Optical Company and Joseph Zentmayer. A spacious building for anatomy has lately been added to the equipment of the Department. See also BUILDINGS—*The Veterinary Hospital.*

ZOOLOGY AND ENTOMOLOGY.

The outfit of the Department is ample, consisting of general zoological collections, an entomological collection, a series of skeletons, alcoholic specimens, and all needed instruments. See also MUSEUMS—*The Zoological Museum.*

THE MUSEUMS.

THE GEOLOGICAL MUSEUM of the University has been collected and arranged with reference to instruction rather than display. The basis of it is a large and comprehensive collection of the rocks, fossils and economic minerals of Ohio. The collection embraces the following named series:

(*a.*) An excellent representation of the leading divisions of the geological scale of the State, so far as it can be illustrated by rock specimens. The specimens represent the leading phases of each formation, and in many cases carry the characteristic fossils of the horizons from which they are derived.

(*b.*) A collection of the animal and vegetable fossils of the rocks of Ohio. This series includes a large majority of the described fossils of our formations, and in the number are many type specimens. While all the ages of our geological history are well represented, the collection of the Upper Silurian and Devonian animal fossils is particularly rich and complete. A remarkably fine series of coal plants is also included in the museum. The list of fossils has been greatly extended in the number of species and individuals by the recent purchase of the collection of Mr. Henry Moores, of Columbus.

(*c.*) The economic minerals of the State are also shown to excellent advantage in the museum. The coals, petroleums, iron ores, clays and building stones produced in Ohio are represented in large collections. Many of the specimens upon which chemical examinations or physical tests have been based in the work of the geological survey of the State are included here.

(*d.*) Petrographical collections: These collections were selected with a view to their use in petrographical instruction and embrace the Hawes collection, the Krantz collection and the Rosenbusch complete series of typical rock specimens from important centers abroad. These land-specimens are supplemented by two series of thin sections, including Voigt and Hochgesang's collections of typical rocks and of the petrographically important minerals.

In addition to the collections above described, the museum contains a great deal of valuable material in the line of general geology and mineralogy. Among other things it includes several valuable suites of ores, and many fine mineral specimens.

There also belong to the museum a number of geological casts, models and maps. In this series are included a relief map of the State of Ohio, and also the models of the basins of the Atlantic ocean and Caribbean sea, prepared under the supervision of the United States Coast and Geodetic Survey.

The catalogue of the museum contains more than 8,000 entries, but as only one number is as a rule given to a fossil or a mineral species, the individual specimens make an aggregate list of many thousands in addition to the catalogue list, and probably double this list.

The skeleton of a mastodon, one of the extinct elephants of Ohio, has recently been presented to the museum by N. S. Conway, of Catawba, O., on whose farm it was found. It has been mounted by Prof. H. A. Ward, of Rochester, N. Y., and proves to be one of the largest in the country.

THE ZOOLOGICAL MUSEUM is located on the basement floor of the east wing of University Hall. The foundations of a zoological museum have been laid and work

begun on a generous plan. Every effort is being made to secure and preserve excellent specimens in all groups of animals. Not only the adult animals are preserved, but the preparatory stages, their work and architecture; in fact, all that can illustrate their life-history and habits.

Among its features and recent additions may be mentioned the Wheaton collection of the birds of Ohio, numbering about 1,000 skins. These have been arranged in Harvard boxes, and may be consulted at any time by those interested.

About 3,500 species of molluscan shells have recently become the property of the museum. These will soon be displayed in suitable cases.

Among the mammals added are two fine specimens of moose, an animal fast disappearing from North America. Our reptiles, fishes and insects are being accumulated as rapidly as possible. There is, besides, a good supply of skeletons, crania and alcoholic material for the laboratory courses in comparative anatomy, general zoology and entomology.

THE BOTANICAL MUSEUM occupies the second floor of Botanical Hall. It contains the University herbariums, both general and State, also Professor Kellerman's private herbarium of over 20,000 specimens deposited for use in the Botanical Department; a complete collection of the native woods of Ohio; a collection of the seeds and fruits of plants; a collection of native medicinal plants; a general collection of vegetable products, including seeds, textile fibers, coloring substances, etc., illustrating economic or applied botany.

THE AGRICULTURAL MUSEUM. For a description of this museum, see Laboratories and Equipment Agriculture.

THE ANATOMICAL AND PATHOLOGICAL MUSEUM. For a description of this museum, see Laboratories and Equipment, Veterinary Medicine.

THE MUSEUM OF CLAYWORKING AND CERAMICS is now in process of formation. Some excellent specimens of ceramic products have already been collected and efforts are being made to increase the collection.

ARCHEOLOGICAL COLLECTIONS. Orton Hall contains one of the best exhibits in the State, illustrating the life of the ancient tribes of Ohio. The collection has been placed in the museum during the last eight months and is the result of the combined efforts of the State Archeological and Historical Society, the University, Mr. Marshall Anderson and the curator, Warren K. Moorehead. There are more than 21,000 specimens now in the archeological museum, representing the work of a number of collectors during fifteen years, and the collection is growing rapidly. Mr. Simonton, Mr. Rennick, Mr. Hilliard and other Ohio archeologists have added to the collection the results of their labor, representing all the specimens known to have been used by primitive man in the localities where the collectors reside.

The chief exhibits are from Fort Ancient, Warren county, and from the mound region of the lower Scioto valley. The collection from Fort Ancient includes the domestic tools and utensils of the women, the weapons and ornaments of the men, the toys of the children and the charms of the medicine men. The highest and lowest of the arts are represented. Specimens of the pottery from this famous fortification, are especially numerous.

The exhibit from Ross county contains copper objects, effigy pipes, several large pipes representing a bird or a frog, slate ornaments and ceremonials, attesting a higher plane of culture than that reached by any other prehistoric tribe in the Mississippi valley. The distinction in culture between the tribes of Ohio, shown by the collection, constitutes one of its strong points. A considerable collection of the pottery, implements and crude ornaments of a most primitive savage tribe once living between the Scioto and Miami valleys is also shown.

The recent investigations about Columbus are represented in the Ambos Mound collection, which includes a skeleton buried in a doubled-up position sur-

rounded by a box and removed with the earth in which it lay, illustrating a mound builder interment.

From Flint Ridge an exhibit illustrates the manufacture of arrow and spear heads. Numerous photographs and drawings acco npany the specimens of this exhibit. The collection from the Muskingum valley shows the characteristics of an eastern family of mound builders. A series of photographs represent modern Indian life among the Sioux.

There is also a large collection of pottery from Missouri and Arkansas and small typical collections from other parts of the United States. The jars, vases and other forms of ancient ware show the highest art attained by the mound builders. Some of the vessels are effigies of animal, bird or human form. The art exhibited is unique and interesting. A system of exchanges has added largely to the collections, as has also the field work during the past summer in Ross and Pickaway counties.

The founders of the archeological collection hope to arouse public interest in the preservation and study of Ohio antiquities and in the science of archeology and anthropology. The curator lectures on archeology and anthropology weekly during the months of October and November, and will assign work upon the collections to students who wish to study archeology.

LIBRARIES.

UNIVERSITY LIBRARIES.

THE GENERAL LIBRARY is located in Orton Hall, the east end of that building having been designed for its use until a separate building can be erected. This library contains about 13,000 bound volumes and 7,000 pamphlets, and is a circulating library for officers and students of the University.

Through the kindness of friends of the University among whom mention should be made of Wm. S. Sullivant, John G. Deshler, Allen W. Thurman and the German Library Association, some valuable collections have been incorporated in this library. The Shakespeare Alcove is a memorial to the class of '87. With funds collected by this class some fine works have been secured. Up to this time there have been purchased the following:—The Variorum Shakespeare (H. H. Furness) so far as issued, The Papers of the Old Shakespeare Society, Transactions of the New Shakespeare Society, Jahrbucher der Deutschen Shakespeare-Gesellshaft, Shakespeare in Germany in the 16th and 17th Centuries (Albert Cohn), and Shakesperiana (volumes 1 to 5).

The library hours are from 8 A. M. until 5 P. M. on all week days during term time; from 9 A. M. until 12 M. during the holiday vacation, and during the summer vacation, two afternoons of each week, legal holidays being excepted.

THE LAW LIBRARY contains the Noble Law Library (presented by the widow of the late Henry C. Noble, of Columbus) and the Ohio State Reports—about 1,100 volumes. This library is located in Hayes Hall in one of the rooms adjoining the lecture rooms of the School of Law. Emerson McMillen, Esq., of Columbus, has generously placed in the hands of the Faculty of the School of Law, three thousand dollars to be expended in additional books for the library of the School. This gift renders possible considerable additions to the law library, and these are now being made.

The management of these libraries is vested in a body known as the Library Council, which consists of seven members, as follows: The President of the University and the Librarian, *ex-officiis* and five professors (one of whom is a member of the Law Faculty) elected for a term of two years each.

STATE LIBRARIES.

The State Library, which occupies a large room in the State House, is open to all students as a reference library six days in the week from 9 A. M. to 12 M., and from 2 P. M. to 5 P. M., and when the Legislature is in session, from 7 P. M. to 9 P. M., also. It contains about 65,000 volumes.

The State Law Library is the largest and most complete law library in the State. It consists of about 15,000 volumes and contains complete sets of the English, Scotch, Irish, Canadian, United States and State reports, statutes and digests. The important legal periodicals are on file. It is open six days in the week from about 8:30 A. M. to 5:30 P. M., with the exception of about one hour and a half at noon.

CITY LIBRARIES.

The students of the University, as residents of Columbus, have access to the City Library and the Public School Library under the usual regulations. The City Library in the City Hall contains about 15,000 volumes. It is open six days in the week from 9 A. M. to 8 P. M.

The Public School Library has a convenient new building on Town street. It contains about 26,000 volumes which are classified according to the Dewey system. It is open six days in the week from 8 A. M. to 6:30 P. M. Students will find both libraries valuable in supplementing the University Library.

TERMS AND VACATIONS.

The first term of each college year begins on Wednesday following the tenth day of September, and closes on the Wednesday preceding Christmas. The second term begins on the Wednesday following the first day of January, and closes on the Friday following the twenty-first day of March. The third term begins on the Monday following the close of the second term, and closes on Commencement Day, which is the Wednesday following the eleventh day of June.

Regular college exercises are omitted on Thanksgiving Day and the day following, on the twenty-second day of February, and on Memorial Day.

FEES.

I. COLLEGIATE DEPARTMENT AND PREPARATORY DEPARTMENT.

INCIDENTAL FEE.—A charge of five dollars a term, or fifteen dollars a year, is made against all students, under the head of incidental expense. In the case of former students, if this fee is not paid until the second day of the term, one dollar will be added, and for each succeeding day of delinquency fifty cents will be added.

LABORATORY FEES.—Students in the laboratories and shops are required to pay fees to cover, in part, the cost of the materials consumed, and the deterioration of the expensive instruments used by them. The fees charged per term in the laboratories mentioned below are as follows:

Laboratory of Physics, five hours a week	$7 00
Laboratory of Physics, two or three hours a week	5 00
Laboratory of Histology	5 00
Laboratory of Comparative Anatomy	5 00
Laboratory of Zoology	5 00
Laboratory of Physiology	5 00
Laboratory of Botany	2 00
Mechanical Laboratory	5 00
Shops	7 00
Laboratory of Clayworking and Ceramics	5 00

In the laboratories of the Departments of General Chemistry, Agricultural Chemistry, Pharmacy, and Metallurgy each student is required at the beginning of each term to pay a fixed charge of one dollar and fifty cents for gas and water. He is also required to buy his own supplies, as he needs them, at the general storeroom in Chemical Hall where laboratory supplies are sold to students at first cost to the University.

All term dues must be paid at the opening of each term as a condition of admission to classes.

GRADUATION FEE.—A fee of five dollars to cover expenses of graduation, diplomas, etc., is required of each person receiving one of the ordinary degrees from the University, and this fee must be paid before the degree is conferred. A like fee of ten dollars is charged to each person receiving one of the higher or graduate degrees.

FREE SCHOLARSHIPS IN AGRICULTURE AND IN VETERINARY MEDICINE.—A free scholarship good for the Short Course in Agriculture or for the Preparatory and Freshman years of the four-year Course in Agriculture, is granted to one student annually from each county in Ohio. Each scholarship is valid two years from its grant and covers all college dues, (incidental and laboratory fees), but the person appointed to receive its benefits is subject to all the other conditions prescribed for admission to the Course. If in any county there is no applicant for the free scholarship in Agriculture, then a free scholarship good for two years of the Course in Veterinary Medicine may be granted; subject to the same conditions as are prescribed for the free scholarship in Agriculture. The appointments are made by the county boards of agriculture, and are not transferable by the appointees. To learn whether the scholarship of a given county for the current year has been granted, inquiries should be addressed to the Secretary or President of the County Agricultural Society. For further information concerning these scholarships, inquiries should be addressed to the President of the University or the Professor of Agriculture.

II. LAW SCHOOL.

INCIDENTAL FEE.—An incidental fee of fifteen dollars per year is charged to regular undergraduate students, payable in advance at the beginning of the year.

Upon payment of the incidental fee law students will be admitted to all the privileges of all the other Departments of the University, upon the same terms as to admission, discipline, character of studies selected, etc., as other students in the Collegiate Department.

TUITION FEE.—In addition to the incidental fee named above, a tuition fee of forty-five dollars per year is charged to regular undergraduate students, payable in advance at the beginning of the year. Collegiate students who elect work in the School of Law will be charged such part of the forty-five dollars tuition as is proportioned to the number of hours elected.

GRADUATE FEE.—A graduate fee of thirty dollars per year is charged to all who take the full graduate work, payable in advance.

DIPLOMA FEE.—A fee of five dollars (to cover the expenses of graduation, diplomas, etc.,) is charged to all who take the degree of Bachelor of Laws, and a fee of ten dollars is charged to those taking the degree of Master of Laws. These fees must be paid before the degrees are conferred.

Special students will be required to arrange their fees satisfactorily with the Dean or Secretary before being admitted.

OTHER EXPENSES.

There are two dormitories on the University grounds for the use of students. Each occupant is charged by the University a rent of one dollar and fifty cents a term.

The South Dormitory affords unfurnished rooms to such students as desire to board themselves, and thus to reduce their expenses to a minimum. Twenty students can be accommodated in this building, two students being assigned to each room. The expense of living in this way falls below two dollars per week. Applications for rooms should be made to the President of the University.

The North Dormitory will accommodate more than sixty students. It is, for the present, turned over to the University Club. Board, furnished rooms, fuel, light and washing are, at present prices, supplied for about three dollars and twenty-five cents a week. New students will not, however, be admitted without special recommendation to the President of the University, and by him to the club. A student who occupies a room in either dormitory at the close of a collegiate year has a preferred claim for the next year; but when a student has once relinquished his room he can re-enter the dormitory only on the recommendation of the President of the University, and under the same conditions as a new student.

Boarding clubs are also formed in the neighborhood of the University. Several such clubs have been organized with very satisfactory results. Furnished rooms are rented at seventy-five cents to one dollar a week for each student, and the cost of board is two dollars to three dollars a week.

Board, with furnished rooms, can be obtained in private families, within convenient distances of the University, at rates varying from four dollars to five dollars a week. The ruling rate may be taken as four dollars and fifty cents.

The uniform with which the members of the battalion are required to provide themselves costs about twenty-three dollars.

The expenses of a student in the Collegiate Department for a year may be estimated as follows, excluding clothing (except uniform) and traveling expenses:

	Low.	Moderate.	Liberal.
Incidental fees	$15 00	$15 00	$15 00
Laboratory fees	.....	15 00	54 00
Books and stationery	15 00	25 00	40 00
Room	4 50	37 00	75 00
Furniture	10 00	.....	.....
Board	70 00	110 00	150 00
Uniform	20 00	22 50	25 00
	$134 50	$224 50	$359 00

The second and third estimates for room include light, fuel and care. The third estimate is for a room occupied by a single student. The requirements for laboratory fees and books depend upon the course of study pursued.

The expenses of a year in the Law School may be estimated as follows, excluding clothing and traveling expenses:

	Low.	Moderate.	Liberal.
Incidental fees and tuition	$60 00	$60 00	$60 00
Books and stationery	25 00	40 00	60 00
Room	25 00	35 00	75 00
Board	60 00	110 00	180 00
	$170 00	$245 00	$375 00

OUTSIDE EMPLOYMENT.

There is a large amount of work on the University farm which can be performed to advantage by the students, and for which they are paid at current rates for such labor. Some students defray all their expenses in this way. Preference is given to students in the Department of Agriculture, and to those who are ready to

devote a certain number of hours each day to the work assigned. Applications for employment should be made to Mr. Franklin P. Stump, foreman of the University Farm, Columbus, Ohio. *Work cannot be promised to all applicants.*

FELLOWSHIPS.

The Board of Trustees have established three fellowships, one in Mathematics, one in Zoology and Entomology, and one in Mining and Metallurgy. The period of incumbency for any one person is two years. The fellowship in Mathematics pays $400 a year, and each of the other two pays $300 the first year and $400 the second year. The term of the present appointees will expire in June, 1896.

AIDS TO MORAL AND RELIGIOUS CULTURE.

Chapel services are held daily, except Saturday and Sunday, at the University, at which the attendance of all students is expected, except when they are excused for special reasons. The services usually consist of singing, reading of the scriptures and prayer.

One of the most commendable organizations in the University is a branch of the International Young Men's Christian Association, organized in 1883. It has a large membership and steadily grows in influence. Services are held weekly. New students are made cordially welcome, and young church members will here enjoy Christian influences and fellowship in college life. A University Circle of the Order of the King's Daughters holds its meeting once a week, and includes in its membership a majority of the women attending the University. A club for the study and practice of philanthropy has recently been organized by the King's Daughters.

An effort is being made to complete, by subscription, the fund which was begun two years ago by students, alumni, and professors, for the erection of a building to accommodate the religious organizations of the University.

SPECIAL LECTURES.

It is the custom of several departments of the University, as opportunity offers to provide the student community with special lectures, by men of note, upon subjects connected with the work of their departments. Since the last catalogue was issued, the Department of History has provided one such lecture, by Professor Ephraim Emerton, of Harvard University, on the subject, "The Interest and Value of Mediæval Studies."

The Department of Agriculture, which for the last few years has offered a course of ten special lectures a year, provided during the session of 1893–4 the following list:

1. Some Experience in Horticulture—N. Ohmer, Dayton.
2. The Need of Special Training for the Dairyman—W. D. Hord, Ft. Atkinson, Wis.
3. Among the Horses—F. A. Derthick, Mantua.
4. The Farm as an Educator—Professor Townshend.
5. Pleasure and Profit in Fruit Growing—A. T. McKelvey, St. Clairsville.
6. Mistakes to Avoid in Sheep Husbandry—S. H. Todd, Wakeman.
7. Some Principles in Feeding and Breeding Sheep—J. Freeman Hickman, Wooster.
8. Problems in Southern Ohio Agriculture—Alva Agee, Cheshire.
9. Animal Portraiture and Engraving—J. W. Hills, Delaware.
10. Taxation as it Affects Agriculture—W. N. Cowden, Quaker City.
11. The World's Columbian Dairy Test—M. A. Scovell, Lexington, Ky.
12. The World's Columbian Dairy Test (Continued)—M. A. Scovell, Lexington, Ky.

Mr. Warren K. Moorehead, Curator of the Archæological Collections, gave durthe first term of 1894–5, the following course of lectures:

1. American Archæology and Ethnology.
2. The Mound Building Tribes of North America.
3. The Cliff Dwellers and Pueblo Tribes of the Southwest.
4. The Aztecs, Peruvians and Mayas.
5. The Position of Woman Among the American Tribes.
6. The American Indian, Historically Considered.

LITERARY, ECONOMIC, AND SCIENTIFIC SOCIETIES.

The Alcyone Literary Society, open to male students, was founded in 1874, and the Horton Literary Society, open to male students, was founded in 1875. These societies have commodious and well furnished apartments in University Hall The Browning Literary Society founded in 1883, and the Philomathean Literary Society founded in 1894, are open to the young women students only. These societies meet weekly, and their work, offering to the student a very desirable training in composition, public speaking, and parliamentary order, is a valuable adjunct to collegiate education. The Newman Literary Society, membership in which is open to Catholic students, was organized in 1892, and holds its meetings bi-weekly.

The Biological Club is an organization of professors and students for mutual assistance and improvement in the line of natural science. Its meetings are regularly held every two weeks, at which papers are read, notes of observation and research presented, and current biological literature discussed. The Chemical Association is a similar organization in the line of chemistry.

The Political Science Association is an organization of instructors and students in political science and history for the consideration of questions in those fields. At the regular bi-weekly meetings of the association papers are read, researches reported, and current questions and publications in political science considered and discussed.

The Association of Students of the School of Agriculture meets monthly for the discussion of current topics in agricultural and related subjects.

The Engineering Society is a similar organization of students and instructors, holding meetings bi-weekly, for the consideration of questions in the various branches of engineering.

MILITARY SCIENCE AND TACTICS.

Under the law of Congress establishing the University, it is required that instruction shall be given in military science and tactics. In accordance with this provision, an officer of the regular army has been detailed to take charge of the Department of Military Science and Tactics; and the Trustees have directed that all male students, except those in the Law School, seniors and juniors in the Collegiate Department, and such others as may be specially excused, shall be enrolled in the battalion. A uniform has been prescribed, with which each member is required to provide himself; and fifty minutes a day are devoted to drill, except on those days when instruction in tactics is given.

The course of instruction is both practical and theoretical. It is given by means of a systematic drill, supplemented by lectures and recitations, and is so arranged as to occupy five hours per week throughout the year. For purposes of drill, all students enrolled in the Department are organized in a battalion, the officers of which are selected from those students who have shown special proficiency in the work of the Department. Officers receive commissions and non-commissioned officers warrants, issued by the University. A military band has been organ-

ized in connection with this Department, and is supplied with instruments belonging to the University.

The practical course in infantry embraces all the movements prescribed by the drill regulations of the U. S. Army applicable to a battalion. Instruction in artillery embraces such portions of the United States drill regulations as pertain to the formation of detachments, manual of the piece, mechanical maneuvers, aiming drill, and sabre exercise. Instruction also includes duties of sentinels, the various ceremonies performed by troops, and military signaling. The theoretical instruction includes a systematic and progressive course in the drill regulations of the U. S. Army, the preparation of the usual reports and returns pertaining to a company, the organization and administration of the U. S. Army and the elementary principles governing in the art of war.

Competitive drills are held from time to time for two medals, one, the first prize, a gold one, presented to the University by the M. C. Lilley Co., of Columbus, Ohio, the other, the second prize of silver, presented by the present commandant. These medals remain the property of the University, the winner wearing them until the next competition.

The equipment of the Department consists of three hundred Springfield cadet rifles and sets of infantry equipments, two 3-inch rifles, sixteen officers' swords and belts, eighteen sabers and belts, also the necessary equipment for instruction in signaling and instruments for the band.

The U. S. Ordnance Department furnishes an annual allowance of one hundred blank cartridges and three hundred friction primers for the 3-inch rifles, one thousand rounds of ball and one thousand rounds of blank cartridges for cadet rifles.

PHYSICAL TRAINING.

For the physical development and training of students the practical instruction in military tactics is found to be a most valuable aid. In addition to this, the University grounds afford excellent opportunities for general athletics, and the students support well organized clubs in base-ball, foot-ball and lawn-tennis. These general sports are participated in by large numbers, and friendly contests are occasionally held with other colleges. Besides the special clubs named above, the students have an athletic association which holds an annual "Field Day," in which prizes are given to the victors in the various contests usual on such occasions.

OHIO FORESTRY BUREAU.

This Bureau has been established and located at the University by the Legislature for the purpose of inquiring into the best means of preserving and utilizing the forests of the State.

COLLEGIATE DEPARTMENT.

ORGANIZATION.

SCHOOLS.

The collegiate work of the University is divided into six schools, as follows:

The School of Arts and Philosophy consists of those departments represented in the Courses leading to the degrees of Bachelor of Arts and Bachelor of Philosophy.

The School of Science consists of those departments represented in the Course leading to the degree of Bachelor of Science and in the Course Preparatory to the study of Medicine.

The School of Agriculture consists of those departments represented in the Courses leading to the degrees of Bachelor of Science in Agriculture, and Bachelor of Science in Horticulture and Forestry, in the Short Course in Agriculture, and in the Course in Dairying.

The School of Engineering consists of those departments represented in the Courses leading to the degrees of Civil Engineer, Engineer of Mines, Mechanical Engineer, Bachelor of Science in Industrial Arts, in the Short Course in Mining and in the Course in Clayworking and Ceramics.

The School of Pharmacy consists of those departments represented in the Courses leading to the degree of Graduate in Pharmacy.

The School of Veterinary Medicine consists of those departments represented in the Course leading to the Degree of Doctor of Veterinary Medicine.

Each School is under the direction of a standing committee of the Faculty, having power to act in all matters pertaining to the studies of students in the school, in the transfer of students from one school to another, and in matters of minor discipline.

COURSES OF STUDY.

The following Courses of study lead to the degrees indicated in each case:

I. FOUR-YEAR COURSES.

1. The Course in Arts, for the degree of Bachelor of Arts (B. A.)
2. The Latin Course in Philosophy for the degree of Bachelor of Philosophy (B. Ph.).
3. The Modern Language Course in Philosophy, for the degree of Bachelor of Philosophy (B. Ph.).
4. The English Course in Philosophy for the degree of Bachelor of Philosophy (B. Ph.).
5. The Course in Science, for the degree of Bachelor of Science (B. Sc.).
6. The Course in Agriculture, for the degree of Bachelor of Science in Agriculture (B. Sc.).
7. The Course in Horticulture and Forestry, for the degree of Bachelor of Science in Horticulture and Forestry (B. Sc.).
8. The Course in Civil Engineering, for the degree of Civil Engineer (C. E.).

9. The Course in Mining Engineering, for the degree of Engineer of Mines (E. M.).

10. The Course in Mechanical Engineering, for the degree of Mechanical Engineer (M. E.).

11. The Course in Electrical Engineering, for the degree of Mechanical Engineer (M. E.).

12. The Course in Industrial Arts, for the degree of Bachelor of Science in Industrial Arts (B. Sc.).

II. THREE-YEAR COURSES.

1. The Course in Pharmacy for the degree of Graduate in Pharmacy (G. Ph.).

2. The Course in Veterinary Medicine, for the degree of Doctor of Veterinary Medicine (D. V. M.).

3. The Course Preparatory to the Study of Medicine.

III. SHORT COURSES.

1. The Short Course in Agriculture, two years in length.
2. The Short Course in Mining, two years in length.
3. The Course in Clayworking and Ceramics, two years in length.
4. The Course in Dairying, twelve weeks in length.

ADMISSION.

The University is open on equal terms to both sexes.

The entrance examinations for 1895 will be held on Monday and Tuesday, June 10 and 11, and on Monday and Tuesday, September 9 and 10. A part of the examinations may be taken in June and the remainder in September. Conditions incurred at the June examinations must be removed at the September examinations.

Candidates who come from other colleges or universities are required to bring certificates of honorable dismission.

(A). ADMISSION TO THE FOUR-YEAR COURSES.

Candidates for admission to the Course in Arts, Philosophy, Science, Agriculture, Horticulture and Forestry, or Industrial Arts, must be at least sixteen years of age; candidates for admission to any of the Courses in Engineering must be at least seventeen years of age. All must be provided with credentials of scholarship from their last instructor or from the last institution with which they have been connected.

There are three modes of admission to the Freshman class:

1. Candidates who have, in the Preparatory Department of the University, successfully completed the studies requisite for the Course they desire to enter, are admitted without examination.

2. Certificates of high schools and normal schools in Ohio are accepted, if found satisfactory, in lieu of examination, for preparatory studies, under the following conditions:

(*a*) Each certificate must show that the candidate has completed the course of study in the school from which he comes, and must further contain a detailed statement of the studies pursued, the text books used, the amount of work done in each study, the amount of time devoted to it, the date of the examination, and the rank or standing of the candidate in it. A copy of the course of study should accompany the certificate; and both should be sent to the University not later than the first of September.

(*b*) From time to time the Faculty has approved the course of study in certain high schools of the State; and the graduates of these high schools are admitted to Freshman work on presentation of their diplomas, subject, however, to conditions in all required studies not included in their high school course.[1]

3. All other candidates are subject to examination on the group of studies mentioned below under the headings of those Courses in the University which they severally desire to enter. Full equivalents for the text-books named will be accepted.

1. FOR ADMISSION TO THE COURSE IN ARTS.

The following are the requirements for admission:

1. *Grammar, Geography, Arithmetic.*

2. *English.*—Genung's Outlines of Rhetoric, or Hill's Elements of Rhetoric. or Hill's Foundations of Rhetoric, or an equivalent; and an essay of about five hundred words to be written in the presence of the examiner, correct in spelling, grammar, punctuation, capital letters, sentential structure, and paragraphing. The subjects for 1895 will be taken from the following works, with the substance of which —the plots, incidents, characters, etc.—it is expected that the candidate will make himself thoroughly familiar; Shakespeare's Twelfth Night; Scott's Abbot; Irving's Sketch Book; Longfellow's Evangeline. The subjects for 1896 will be taken from Shakespeare's A Midsummer Night's Dream; George Eliot's Silas Marner; Macaulay's Essays on Milton and Addison; Milton's L'Allegro, Il Penseroso, Comus and Lycidas. Equivalents of these will be accepted.

For securing the proper preparation, the following course is recommended: (1.) A few lessons and constant practice in the proper use of the Unabridged Dictionaries. (2.) A thorough mastery of the elements of English Grammar. (3.) Daily recitations for at least one term in some such work as Genung's Outline of Rhetoric. (4.) Weekly exercises in original composition for at least one year. Scott & Denney's Paragraph Writing is recommended to teachersas a guide. (5.) A careful reading of the works enumerated above.

3. *History.*—Johnston's History of the United States; and Myers's General History.

4. *Civil Government.*—Fiske's or Thorpe's preferred.

5. *Algebra.*—Wentworth's or Wells's Elements of Algebra, complete.

6. *Geometry.*—Venable's, Wentworth's or Wells's Plane and Solid Geometry.

7. *Trigonometry.*—Lock's Elementary Trigonometry.

8. *Botany, Physiology, Geology, Astronomy.*—Any one one of these subjects.

9. *Physical Geography.*—Geikie's Physical Geography.

10. *Physics.*—Gage's or Carhart and Chute's Elements of Physics.

11. *Latin.*—Pronunciation (the Roman method preferred); Grammar (Allen and Greenough's, revised edition, preferred); Prose Composition; Cæsar, the first four books of the De Bello Gallico; Cicero, the first four orations against Catiline, and the orations for Archias and Marcellus; Vergil, the first six books of the Æneid. History of Rome, (Pennell's preferred).

[1] NOTE—In case the authorities of any high school or normal school desire to have a definite standing fixed for the admission of its graduates, a committee of the Faculty will visit the school and on report of this committee, a standing will be fixed for the graduates of the school, such standing to be valid for a period of three years.

The list of high schools to whose graduates a definite standing has been assigned in accordance with the foregoing is at present as follows: Akron, Alliance, Barnesville (Four-year Course), Batavia, Bellaire, Bement (Ill.), Canton, Carey, Chardon, Chillicothe, Cincinnati, Cincinnati Technical School, Circleville, Cleveland, Columbus, Coshocton (Latin Course), Dayton, Defiance, Delaware, East Liverpool, Elyria, Fremont, Galion, Gallipolis, Grand River Institute, Hamilton, Hillsboro, Ironton, Jefferson Educational Institute, Lancaster, Lima, Lorain, Mansfield, Marietta, Massillon, Marion, Martin's Ferry, Miamisburg, Middletown, Mt. Sterling, Mt. Vernon, Newark, New South Lyme, New Vienna, Norwalk, Piqua, Pomeroy, Portsmouth, Richwood, Sandusky, Salem, Sidney, Springfield, Steubenville, Tiffin, Toledo, Troy, Urbana, Van Wert, Warren, Wooster, Xenia, Youngstown and Zanesville.

NOTE.—The work in Geometry, Trigonometry, Botany, Physics, Vergil and Latin Prose Composition required for admission to the Course in Arts and to the Latin Course in Philosophy, may be done in the Preparatory Department of the University. The University does not provide preparation in the other subjects required for admission to these Courses.

II. FOR ADMISSION TO THE LATIN COURSE IN PHILOSOPHY.

The requirements are the same as for admission to the Course in Arts.

III. FOR ADMISSION TO THE MODERN LANGUAGE COURSE IN PHILOSOPHY.

The requirements are the same as for admission to the Course in Arts, except that for the foreign language required, candidates may offer either *Latin*, as for the Course in Arts, or *French* as for the English Course in Philosophy, or *German*, as follows:

Joynes-Meissner's German Grammar, complete; Joynes's German Reader, complete; Hauff's Liechtenstein, Lessing's Minna von Barnhelm, Huss's Sessenheim and Buchheim's Goethe's Dichtung and Wahrheit. Equivalents are accepted.

NOTE.—The work in Geometry, Trigonometry, Botany, Physics, and in the last year of German, required for admission to the Modern Language Course in Philosophy, may be done in the Preparatory Department of the University. The University does not provide preparation in the other subjects required for admission to this Course.

IV. FOR ADMISSION TO THE ENGLISH COURSE IN PHILOSOPHY.

The requirements are as follows:

1. *Grammar*, *Geography* and *Arithmetic*.

2. *English Language*.—The same as for admission to the Course in Arts, and inasmuch as no foreign language is required in preparation for this Course, it will be necessary, in order to secure a corresponding grade of attainments, to give more time to the study of the English Language than is required in preparation for the other Courses. The amount required is represented by Meiklejohn's "The English Language."

3. *English Literature*.—Daily recitations for at least one year will be requisite. Pancoast's Introduction to English Literature is recommended as an outline of the subject. At least four-fifths of the time devoted to this subject should be spent in studying the works of representative authors.

4. *History*.—Myers's General History, and Johnston's History of the United States, and Montgomery's English History or equivalents.

5. *Civil Government*.—Fisks's or Thorpe's preferred.

6. *Algebra*.—Wentworth's or Wells's Elements of Algebra, complete.

7. *Geometry*.—Venable's, Wentworth's or Wells's Plane and Solid Geometry

8. *Trigonometry*.—Lock's Elementary Trigonometry.

9. *Physics*.—Gage's or Carhart and Chute's Elements of Physics.

10. *Physical Geography*.—Geikie's Physical Geography.

11. *Botany*, *Chemistry*, *Geology*, *Zoology*, *Physiology* and *Astronomy*.—The candidate may offer any three of these subjects. The requirements are as follows:

Botany.—Gray's Lessons or an equivalent.

Chemistry.—Williams's, or an equivalent.

Geology.—Geikie's or an equivalent.

Zoology.—Packard's (briefer course), or an equivalent.

Physiology.—Martin's (briefer course), or an equivalent.

Astronomy.—Young's (for beginners), or an equivalent.

12. *French*, *German* and *Latin*.—In place of the *English Literature*, *English History* and *two* of the *three optional sciences* specified above, the candidate for admission may present *French*, or *German*, or *Latin*, as follows:

(*a*) *French*.—The whole subject of French Grammar. Candidates will be expected to read at sight easy French, and to translate correctly into French, simple

English sentences. Two years ought to be given to this study, the first year being spent mainly on the Grammar, and the second devoted to reading good modern French. The texts read should be chiefly narrative and conversational prose, modern, rather than classic, dramas should be read.

(*b*) *German.*—The same as for admission to the Modern Language Course in Philosophy.

(*c*) *Latin.*—The same as for admission to the Course in Arts.

NOTE.—The work in Geometry, Trigonometry, Botany, Physics, Vergil and Latin Composition, and the last year of German, required for admission to the English Course in Philosophy, may be done in the Preparatory Department of the University. The University does not provide preparation in the other subjects required for admission to this Course,

V. FOR ADMISSION TO THE COURSE IN SCIENCE.

The requirements are the same as for admission to the Course in Arts, except (1) that the candidate may offer, for the foreign language required, either *German* the same as for the Modern Language Course in Philosophy, or *French* as for the English Course in Philosophy, or *Latin*, as for the Course in Arts; and (2) *Botany*, Gray's or an equivalent, *must* be presented as the science instead of requiremen· number 8 of the requirements for admission to the Course in Arts.

NOTE.—The work in Geometry, Trigonometry, Botany, Physics, and in Vergil and Latin Prose Composition or the last year of German, required for admission to the Course in Science, may be done in the Preparatory Department of the University. The University does not provide preparation in the other subjects required for admission to this Course.

VI. FOR ADMISSION TO THE COURSE IN AGRICULTURE.

The following are requirements for admission:

1. *Grammar*, *Geography* and *Arithmetic.*
2. *History.*—History of the United States, Johnston's preferred.
3. *Algebra.*—Venable's Easy Algebra, complete, or an equivalent.
4. *Plane Geometry.*—Venable's, Wentworth's or Wells's or an equivalent.
5. *Physics.*—Gage's or Carhart and Chute's Elements of Physics.
6. *English.*—Genung's Outlines of Rhetoric, or an equivalent.
7. *Botany.*—Gray's Lessons or an equivalent.
8. *Physical Geography.*—Geikie's Physical Geography, or an equivalent.
9. Either one of the following subjects:
   (*a*) *Civil Government.*—Fiske's, or Thorpe's preferred.
   (*b*) *General History.*—Myers's preferred.

NOTE.—The work in Geometry, Physics and Botany, required for admission to the Course in Agriculture, and to the Course in Horticulture and Forestry, may be done in the Preparatory Department of the University. The University does not provide preparation in the other subjects required for admission to this Course.

VII. FOR ADMISSION TO THE COURSE IN HORTICULTURE AND FORESTRY.

The requirements are the same as for admission to the Course in Agriculture.

VIII. FOR ADMISSION TO THE COURSE IN CIVIL ENGINEERING.

Candidates must be at least seventeen years of age.

The following are the requirements for admission:

1. *Grammar*, *Geography* and *Arithmetic.*
2. *Algebra.*—Venable's, Wentworth's or Wells's Elements of Algebra, complete or an equivalent.
3. *Geometry*, *Plane and Solid.*—Wentworth's or Wells's, or an equivalent.
4. *Physics.*—Gage's or Carhart and Chute's Elements of Physics, complete or an equivalent.

5. *English.*—The requirements are the same as for admission to the Course in Arts.

6. *History.*—Johnston's History of the United States, or an equivalent.

7. Any *two* subjects chosen by the candidate from the following:

(*a*) *Botany.*—Gray's Lessons preferred.

(*b*) * *Physical Geography.*—Geikie's preferred.

(*c*) *Physiology.*—Martin's (briefer course), or an equivalent.

(*d*) *Astronomy.*—Young's (for beginners), or an equivalent.

(*e*) *Civil Government.*—Fisk's or Thorpe's preferred.

(*f*) *General History.*—Myers's preferred.

(*g*) *English Literature.*—Pancoast's Introduction to English Literature, or an equivalent.

NOTE—The work in Geometry, Physics and Botany, required for admission to the Courses in Engineering and to the Course in Industrial Arts, may be done in the Preparatory Department of the University. The University does not provide preparation in the other subjects required for admission to these Courses.

IX. FOR ADMISSION TO THE COURSE IN MINING ENGINEERING.

Candidates must be at least seventeen years of age.

The requirements are the same as for admission to the Course in Civil Engineering.

X. FOR ADMISSION TO THE COURSE IN MECHANICAL ENGINEERING.

Candidates must be at least seventeen years of age.

The requirements are the same as for admission to the Course in Civil Engineering.

XI. FOR ADMISSION TO THE COURSE IN ELECTRICAL ENGINEERING.

Candidates must be at least seventeen years of age.

The requirements are the same as for admission to the Course in Civil Engineering.

XII. FOR ADMISSION TO THE COURSE IN INDUSTRIAL ARTS.

Candidates must be at least sixteen years of age.

The requirements are the same as for admission to the Course in Civil Engineering.

(B). ADMISSION TO THE THREE-YEAR COURSES.

I. FOR ADMISSION TO THE COURSE IN PHARMACY.

Candidates must be at least sixteen years of age; and are subject to examination in orthography, grammar, geography, arithmetic and algebra. The requirement in algebra is the first eight chapters of Wentworth's Elements of Algebra, or an equivalent amount. Candidates who have had two years' experience in a drug store will be admitted as special students without examination in algebra provided that if any such student afterwards becomes a candidate for a degree, he shall pass the omitted examination before the degree is conferred.

II. FOR ADMISSION TO THE COURSE IN VETERINARY MEDICINE.

1. For applicants not candidates for a degree. Candidates must be at least seventeen years of age; and are subject to examination in grammar, geography and arithmetic.

2. For applicants who intend to become candidates for the degree of Doctor of Veterinary Medicine.

Candidates must be at least seventeen years of age; and are subject to examination as follows:

1. Grammar, Geography and Arithmetic.
2. History of the United States, Johnston's preferred.
3. Physics, Gage's or Carhart and Chute's, or an equivalent.
4. Genung's Outlines of Rhetoric, or an equivalent.
5. Gray's Lessons, or an equivalent.
6. Geikie's Physical Geography, or an equivalent.
7. One year of Latin or German.

For admission to either of these Courses high school diplomas or teachers' certificates, good for at least one year, will be accepted in lieu of examination in the subjects which they include. Teachers' certificates must be valid at the time they are presented.

NOTE.—The work in Physics and Botany, required for admission to the Course in Veterinary Medicine, may be done in the Preparatory Department of the University. The University does not provide preparation in the other subjects required for admission to this Course.

III. FOR ADMISSION TO THE COURSE PREPARATORY TO THE STUDY OF MEDICINE.

Candidates must be at least seventeen years of age.

The following are the requirements for admission:

1. *Grammar*, *Geography* and *Arithmetic*.
2. *Algebra*.—Wentworth's or Wells's Elements of Algebra, through quadratics.
3. *Geometry*, *Plane* and *Solid*.—Venable's, Wentworth's or Wells's, or an equivalent.
4. *Physics*.—Gage's or Carhart and Chute's, or an equivalent.
5. *English*.—Genung's Outlines of Rhetoric, or an equivalent.
6. *History*.—Johnston's History of the United States, or an equivalent.
7. *Botany*.—Gray's Lessons preferred.
8. One of the following:
   (*a*) *Astronomy*.—Young's (briefer course).
   (*b*) *Civil Government*.—Fiske's, or Thorpe's preferred.
   (*c*) *General History*.—Myers's preferred.

NOTE.—The work in Geometry, Physics and Botany, required for admission to the Course Preparatory to the study of Medicine, may be done in the Preparatory Department of the University. The University does not provide preparation in the other subjects required for admission to this Course.

(C). ADMISSION TO THE SHORT COURSES.

For admission to these Courses high school diplomas or teachers' certificates, good for at least one year, will be accepted in lieu of examination. Teachers' certificates must be valid at the time they are presented.

I. FOR ADMISSION TO THE SHORT COURSE IN AGRICULTURE.

Candidates must be at least fifteen years of age, and unless they are over twenty-one years of age must pass an examination in grammar, geography, arithmetic, and United States History. Candidates who are over twenty-one are admitted without examination.

II. FOR ADMISSION TO THE SHORT COURSE IN MINING.

Candidates are examined in orthography, grammar, geography and arithmetic; but those who are over twenty-one years of age are admitted without examination.

III. FOR ADMISSION TO THE COURSE IN CLAYWORKING AND CERAMICS.

Candidates must be not less than sixteen years of age, and, unless they are over twenty-one years of age, must pass an examination in arithmetic, geography, grammar and orthography.

IV. FOR ADMISSION TO THE COURSE IN DAIRYING.

The requirements are the same as for admission to the Short Course in Agriculture.

(D) ADMISSION TO SPECIAL STUDIES.

Students who desire to pursue special lines of work in the Collegiate Department of the University, and do not desire to become candidates for a degree, will be admitted on the following conditions:

1. When the greater part of the work lies in the Courses in Arts and Philosophy, the regular entrance examinations must be passed.

2. When the greater part of the work lies in the Course in Science, the examination in the language required for admission may be omitted at the option of the committee of the School of Science.

3. But applicants who are not less than twenty-one years of age, after obtaining credit for orthography, English grammar, geography, arithmetic, history of the United States, and such other subjects as may be necessary to qualify them for the classes that they wish to enter, may, on the presentation of satisfactory reasons, be admitted by the proper committee to any class in the University; provided, that if any student who has been admitted on these conditions afterwards becomes a candidate for a degree, he shall take the omitted examinations required for admission to the Freshman year, at least twelve months before the degree is conferred. For the Courses in Mechanical and Electrical Engineering the limit of age for such applicants is eighteen years instead of twenty-one.

4. On entering the University, students desiring to pursue special work are required to lay before the proper committee for approval or modification, a written statement of the end they have in view, the studies proposed for the attainment of that end, and the probable period of attendance. Such students will be held as strictly to their accepted schemes of work as are the regular undergraduates to their course of study. Permission to enter as special undergraduates will be refused to all of whose definiteness of purpose the committee fails to receive satisfactory evidence, and will be withdrawn whenever the conditions on which it was granted cease to exist.

(E) ADMISSION TO ADVANCED STANDING.

1. Candidates who do not come from some other university or college must first obtain admission to the University in the manner already described; they will then be examined on such undergraduate studies as they may ask to be credited with in advance.

2. Candidates who come from the collegiate department of an approved college, and who bring explicit and official certificates describing their course of study and scholarship, and also certificates of honorable dismission, will be admitted without examination, except such as may be necessary to determine what credit they are to receive here for work done in the college from which they come.

(F) ADMISSION TO GRADUATE WORK.

Graduates of this or other institutions, may on application to the Faculty, enter the University and pursue such lines of work as may be arranged or approved by the appropriate collegiate committee. Such graduate students are subject to all the ordinary regulations (as to fees, attendance, etc.) prescribed for undergraduates.

REGISTRATION.

All students are required to register and pay their term fees on the first day of each term, between the hours of 8:30 A. M., aud 12 M., or between 1:30 and 4:30 P. M., central standard time.

Former students who fail to register on this day will be charged one dollar in addition to the usual incidental fee, for the first day of delinquency, and fifty cents additional for each subsequent day.

No candidate for graduation will be permitted to register for the second term of his graduating year except upon presentation to the Bursar, of the President's certificate that his thesis subject has been announced and approved.

MATRICULATION.

Each regular undergraduate, on being admitted to the college classes, will sign the matriculation book, and will be certified by the President or Secretary of the Faculty to the secretary of the appropriate committee, with a statement of the Course and class to which he is admitted, and what conditions, if any, are imposed.

Each special undergraduate, on being admitted to the work of the college classes, will sign the matriculation book, and will be certified to the proper secretary.

CLASSIFICATION OF STUDENTS.

Every undergraduate student enters one of the Schools of the University. In case of irregularity he is assigned to that one in which the majority of his studies are found. Collegiate students are classified as follows: 1. Graduates; 2. Regular Undergraduates; 3. Special Undergraduates.

Graduate students are graduates of this or other approved colleges or universities who are pursuing studies in advance of those represented by their respective degrees as here conferred.

Regular undergraduates are candidates for any of the ordinary degrees, and regular students in the Short Courses.

Special undergraduates are students who, having attained college rank, have been admitted to pursue special lines of work.

RULES AND REGULATIONS.

AMOUNT OF WORK.

No student is permitted to take less than fifteen or more than eighteen hours a week of class-room work, except by special permission of the committee of the School in which he is enrolled; and no student will be permitted to take more than the regular work of the class to which he belongs, who has not passed all his work for the preceding term.

ELECTIVE STUDIES.

All elections of work in continuous studies, when once made, are understood to be made for the entire collegiate year.

The right is reserved to withdraw the offer of any elective study when it is not chosen by at least four persons.

EXAMINATIONS AND STANDING.

The standing of students is reported at the end of each term. This standing is determined by the head of each Department by such means and methods as he may choose; but no student is reported failed without the opportunity of a written examination.

The standing of students in each study is reported at the end of a term as "passed with merit," "passed," "conditioned," or "failed."

The standing "passed," or "passed with merit," indicates that the student has obtained full credit for the term's work in the study in which this standing is obtained.

The standing "conditioned" indicates that credit for the term's work in the study in which the condition was incurred, is deferred. The student is given an

opportunity in the following term to obtain this credit by a re-examination; or, if the study be a continuous one, the professor in charge may, at his discretion, excuse the student from re-examination, and allow credit to be obtained by successfully pursuing the study during the following term. If the student thus excused from re-examination does not pass upon the work of the second term, he is reported as "failed" in the work of both terms.

The standing "failed" indicates that no credit is given for that term's work in that study in which the failure is incurred, and that the student will be required to pursue the same study, in class, in the following year. In case of failure in any continuous study, the work of the term in which the failure occurred must be repeated in class, before any subsequent term's work in that study can be commenced.

Unexcused absence from any regular examination is construed as a failure therein.

At the close of each term students must obtain credit for two-thirds of their work for the term in order to retain their connection with the University; but if students who have not passed in the requisite amount of work can make good their deficiency by the removal of conditions, they may do so at the beginning of the following term, and thus reinstate themselves.

Students reported at the end of any term as failed in one-half their work, forfeit their connection with the University.

ATTENDANCE AND DISCIPLINE.

The State of Ohio offers the privileges of the University to all properly qualified persons who seek those privileges. But the University has no place in its crowded class rooms and laboratories for those who are idle and dissipated. Its young men and young women are expected to show themselves gentlemen and ladies at all times.

Experience has shown that a minute and rigorous code of rules is quite unnecessary here. The following statements may suffice:

Absence and tardiness are usually dealt with by the instructor in whose Department they occur; repeated and persistent cases are referred to the Faculty.

Cases of minor discipline are decided by the committee of the appropriate School; grave offenses against college order are referred to the Faculty for adjudication.

Students are suspended or dismissed whenever in the opinion of the Faculty they are pursuing a course of conduct seriously detrimental to themselves or to the University.

INTERCOLLEGIATE ATHLETIC GAMES.

No student or preparatory pupil of Ohio State University will be permitted to take part in intercollegiate athletic games within any term, who shall have incurred a failure in any subject or shall have standing against him conditions in more than five hours' work incurred in the same term of the previous year, or in any term within one year previous in which he has taken part in intercollegiate athletics unless such condition or failure be shown to be not due to athletics.

DEGREES.

ORDINARY DEGREES.

The degree of Bachelor of Arts is conferred on students who have completed the Course in Arts; the degree of Bachelor of Philosophy on those who have com-

pleted the Latin Course in Philosophy, the Modern Language Course in Philosophy or the English Course in Philosophy; the degree of Bachelor of Science on those who have completed the Course in Science.

The degree of Bachelor of Science in Agriculture is conferred on those who have completed the full Course in Agriculture; the degree of Bachelor of Science in Horticulture and Forestry on those who have completed the Course in Horticulture and Forestry.

The degree of Civil Engineer is conferred on those who have completed the Course in Civil Engineering; that of Engineer of Mines on those who have completed the Course in Mining Engineering; that of Mechanical Engineer on those who have completed the Course in Mechanical Engineering or that in Electrical Engineering.

The degree of Bachelor of Science in Industrial Arts is conferred on students who have completed the Course in Industrial Arts.

The degree of Graduate in Pharmacy is conferred on those who have completed the Course in Pharmacy; and that of Doctor of Veterinary Medicine on those who have completed the Course in Veterinary Medicine.

Except by unanimous consent of the Faculty, no candidate for graduation will be recommended for a degree, whose record is not in all respects complete by the Friday evening previous to the Commencement Day on which he seeks the degree.

THE HIGHER DEGREES.

1. MASTERS' DEGREES.—Masters' degrees are conferred upon graduates in Arts, Philosophy, Science, Agriculture, Horticulture and Forestry, and Pharmacy at the end of not less than one year's residence, during which the candidate is required to pursue and complete an approved course of study in the University. He is required in addition, to present an acceptable thesis upon some subject connected with his Course of study. Masters' degrees are conferred without residence *upon graduates of this institution*, upon the same conditions of study and thesis as above; but these degrees will not be so conferred within less than three years after graduation. *The incidental fee of five dollars a term is due from candidates studying in absentia as from all other students, and should be forwarded to the Bursar of the University at the beginning of each term.*

2. DOCTORS' DEGREES.—The degree of Doctor of Philosophy is conferred upon Bachelors of Arts, Bachelors of Philosophy, and Bachelors of Science at the end of not less than three years' residence and study, during the latter two years of which the candidate is required to pursue and complete an approved Course of study in at least two distinct Departments of the University. He is, in addition, required to present an acceptable thesis, embodying original research.

The degree of Doctor of Science is conferred upon Bachelors of Science and graduates in the full technical courses, at the end of a course of special, advanced study in science, upon the same conditions as to residence, time, and other requirements as are established for the degree of Doctor of Philosophy.

REQUIREMENTS FOR GRADUATION.

THE SCHOOL OF ARTS AND PHILOSOPHY.

STANDING COMMITTEE.

President SCOTT, *Chairman;* Professor BOWEN, *Secretary;* Professors ORTON, NORTON, DERBY, SMITH, KNIGHT, EGGERS, BARROWS and DENNEY.

This School includes the Course leading to the degree of Bachelor of Arts, and the three Courses leading to the degree of Bachelor of Philosophy.

COURSE IN ARTS.

This Course approximates as closely as may be to the "Classical" or "Academical Course of most one-course colleges. As its essential and distinguishing feature the study of Latin and Greek is required, and a liberal share of the Course is devoted to other literary, linguistic, and philosophical work. A large liberty of elective work, made possible by the broad scope of the University, is allowed, and the range of the elective studies widens from the Freshman year to the end of the Course. It will be seen by referring to the course of study that it aims at the full modern interpretation of the idea of a liberal education, and that in both its required and elective features the symmetrical mental development of the student is sought.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FRESHMAN YEAR.

REQUIRED.

FIRST TERM.	Hours per week.	SECOND TERM.	Hours per week.	THIRD TERM.	Hours per week
English (1)	2.	English (1)	2.	English (1)	2.
Practical Rhetoric.		Practical Rhetoric.		Practical Rhetoric.	
Greek (1)	5.	Greek (1)	5.	Greek (1)	5.
Grammar and Lessons.		Anabasis.		Anabasis.	
Latin (1)	5.	Latin (1)	5.	Latin (1)	5.
Livy.		Horace.		Plautus.	
Military Drill.		Military Drill.		Military Drill.	
		Tactics,	2.		

And one of the following groups; the option, when once made, determining the work for the entire year:

I.

Gen'l Chemistry (1) 4. Non-metals.	Gen'l Chemistry (1) 2. Metals. Metallurgy (1) 3. Mineralogy.	Gen'l Chemistry (2) 4. Carbon Compounds.

II.

Gen'l Chemistry (1) 4. Non-metals.	Gen'l Chemistry (1) 2. Metals. Mathematics (5) 3. Higher Algebra.	Mathematics (5) 3. Analytical Geometry.

III.

Mathematics (5) 3. Higher Trigonometry.	Mathematics (5) 3. Higher Algebra. Mathematics (12) 2. Modern Geometry.	Mathematics (5) 3. Analytical Geometry.

SOPHOMORE YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
English (2) Science of Rhetoric.	2.	English (2) Science of Rhetoric.	2.	English (2) Science of Rhetoric.	2.
English (8) Chaucer.	2.	English (8) Literature.	2.	English (8) Literature.	2.
Greek (2) Xenophon.	3.	Greek (2) Herodotus.	3.	Greek (2) Homer.	3.
Latin (2) Pliny; Juvenal.	5.	Latin (2) Horace.	5.	Latin (2) Cicero.	5.
Military Drill		Military Drill.		Military Drill.	
		Art of War,	2.		

ELECTIVE.

Five hours a week through the year, chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter; provided that during his Course he must elect at least three hours in science.

JUNIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Greek (3) Thucydides.	3.	Greek (3) Plato.	3.	Greek (3) Demosthenes.	3.
History (4) United States.	2.	History (4) United States.	2.	History (4) United States.	2.
Philosophy (1) Psychology.	3.	Philosophy (1) Psychology.	3.	Philosophy (2) Ethics.	3.
Political Science (1) Political Economy.	2.	Political Science (1) Political Economy.	2.	Political Science (1) Political Economy.	2.

ELECTIVE.

Five hours a week through the year chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter.

SENIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term	Hours per week.	Third Term.	Hours per week.
Greek (4) Homer.	3.	Greek (4) Sophocles.	3.	Greek (4) Lucian.	3.
Philosophy (3) Logic.	3.	Philosophy (3) Logic.	3.	Philosophy (4) History of Philosophy.	3.

ELECTIVE.

Nine hours a week through the year chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter.

THESIS.

As a requisite for graduation each candidate must present an acceptable thesis, embodying the results of a special research. The subject of the research must lie in one of the branches (other than science) in which the candidate has studied during either of the last two years prior to graduation. The subject, together with a written approval of it by the head of the department within which it lies, must be submitted to the President of the University, not later than the beginning of the second term of the Senior year. The completed thesis must be submitted not later than the second Saturday before Commencement Day.

LATIN COURSE IN PHILOSOPHY.

This Course is similar to the Course in Arts, except that it omits the study of Greek and substitutes work in French or German, and in History. As in the Course in Arts, a wide range of elective studies is offered, designed to afford ample opportunities of a liberal education for those who do not desire to pursue the traditional classical course.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FRESHMAN YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.
French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.
Latin (1) Livy.	5.	Latin (1) Horace.	5.	Latin (1) Plautus.	5.
Military Drill.		Military Drill.		Military Drill.	
		Tactics,	2.		

And one of the following groups; the option, when once made, determining the work for the entire year:

I.

Gen'l Chemistry (1) 4. Non-metals.	Gen'l Chemistry (1) 2. Metals. Metallurgy (1) 3. Mineralogy.	Gen'l Chemistry (2) 4. Carbon Compounds.

II.

Gen'l Chemistry (1) 4. Non-metals.	Gen'l Chemistry (1) 2. Metals. Mathematics (5) 3. Higher Algebra.	Mathematics (5) 3. Analytical Geometry.

III.

Mathematics (5) 3. Higher Trigonometry.	Mathematics (5) 3. Higher Algebra. Mathematics (12) 2. Modern Geometry.	Mathematics (5) 3. Analytical Geometry.

SOPHOMORE YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
English (2) Science of Rhetoric.	2.	English (2) Science of Rhetoric.	2.	English (2) Science of Rhetoric.	2.
English (8) Chaucer.	2.	English (8) Literature.	2.	English (8) Literature.	2.
French (2) Prose. or German (4) or (5) Literature.	3.	French (2) Lyrics. or German (4) or (5) Literature.	3.	French (2) Drama. or German (4) or (5) Literature.	3.
Latin (2) Pl'ny; Juvenal.	5.	Latin (2) Horace.	5.	Latin (2) Cicero.	5.
Military Drill.		Military Drill.		Military Drill.	
		Art of War,	2.		

ELECTIVE.

Five hours a week through the year, chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter; provided that during his Course he must elect at least three hours in science.

JUNIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
History (2) Modern Europe.	3.	History (2) Modern Europe.	3.	History (2) Civilization.	3.
History (4) United States.	2.	History (4) United States.	2.	History (4) United States.	2.
Philosophy (1) Psychology.	3.	Philosophy (1) Psychology.	3.	Philosophy (2) Ethics.	3.
Political Science (1) Political Economy.	2.	Political Science (1) Political Economy.	2.	Political Science (1) Political Economy.	2.

ELECTIVE.

Five hours a week through the year, chosen from any of the courses given in Collegiate Department of the University upon which the student is qualified to enter.

SENIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
History (3) England.	3.	History (3) England.	3.	History (3) England.	3.
Philosophy (3) Logic.	3.	Philosophy (3) Logic.	3.	Philosophy (4) History of Philosophy.	3.

ELECTIVE.

Nine hours a week through the year, chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter.

THESIS.

As a requisite for graduation each candidate must present an acceptable thesis, embodying the results of a special research. The subject of the research must lie in one of the branches (other than science) in which the candidate has studied during either of the last two years prior to graduation. The subject, together with a written approval of it by the head of the department within which it lies, must be submitted to the President of the University, not later than the beginning of the second term of the Senior year. The completed thesis must be submitted not later than the second Saturday before Commencement Day.

MODERN LANGUAGE COURSE IN PHILOSOPHY.

This Course has been framed with a view to the wants of the increasing class of students who desire full and extended training in the modern languages, without pursuing the study of the ancient languages. To that end German and French are required through the greater part of the Course, and opportunity is given for the study of Italian and Spanish. As in the Course in Arts a considerable share of the time is devoted to literary and philosophical work, while large liberty of elective studies is allowed.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FRESHMAN YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.
French (1) Elementary.	5.	French (1) Elementary.	5.	French (1) Elementary.	5.

*German (1) Elementary 5.	*German (1) Elementary. 5.	*German (1) Elementary. 5.
or	or	or
German (4) Literature 3.	German (4) Literature. 3.	German (4) Literature. 3.
History (8) United States. 2.	History (8) United States. 2.	History (8) United States. 2.
Military Drill.	Military Drill.	Military Drill.
	Tactics, 2.	

And one of the following groups, the option when once made, determining the work for the entire year:

I.

Gen'l Chemistry (1) Non-metals. 4.	Gen'l Chemistry (1) Metals. 2.	Gen'l Chemistry (2) Carbon Compounds. 4.
	Metallurgy (1) Mineralogy. 3.	

II.

Gen'l Chemistry (1) Non-metals. 4.	Gen'l Chemistry (1) Metals. 2.	Mathematics (5) Analytical Geometry. 3.
	Mathematics (5) Higher Algebra. 3.	

III.

Mathematics (5) Higher Trigonometry. 3.	Mathematics (5) Higher Algebra. 3.	Mathematics (5) Analytical Geometry. 3.
	Mathematics (12) Modern Geometry. 2.	

SOPHOMORE YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
English (2) Science of Rhetoric.	2.	English (2) Science of Rhetoric.	2.	English (2) Science of Rhetoric.	2.
English (8) Chaucer.	2.	English (8) Literature.	2.	English (8) Literature.	2.
French (2) Prose.	3.	French (2) Lyrics.	3.	French (2) Drama.	3.
German (4) or (5) Literature.	3.	German (4) or (5) Literature.	3.	German (4) or (5) Literature.	3.
History (1) Mediæval.	2.	History (1) Mediæval.	2.	History (1) Mediæval.	2.
Military Drill.		Military Drill.		Military Drill.	
		Art of War,	2.		

ELECTIVE.

Five hours a week through the year, chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter; provided, that during his Course he must elect at least three hours in science.

*Students who have entered with Latin as their preparatory language take German (1) (five hours) during the Freshman year; those who have entered with German as their preparatory language, take German (4) (three hours) and History (8) (two hours) in the Freshman year.

JUNIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
*English (7) Anglo-Saxon.	2.	*English (7) Anglo-Saxon.	2.	*English (7) Anglo-Saxon.	2.
French (4) Daudet.	3.	French (4) Moliere.	3.	French (4) Chanson de Roland.	3.
German (5) Literature. or	3.	German (5) Literature. or	3.	German (5) Literature. or	3.
German (6) Faust.	3.	German (6) Faust.	3.	German (6) Faust.	3.
Philosophy (1) Psychology.	3.	Philosophy (1) Psychology.	3.	Philosophy (2) Ethics.	3.

ELECTIVE.

Five hours a week through the year, chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter; provided, that during his Course he must elect at least three hours in science.

SENIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Philosophy (3) Logic.	3.	Philosophy (3) Logic.	3.	Philosophy (4) History of Philosophy.	3.
Political Science (1) Political Economy.	2.	Political Science (1) Political Economy.	2.	Political Science (1) Political Economy.	2.

ELECTIVE.

Ten hours a week through the year, chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter; provided, that during his Course he must elect at least three hours in science.

THESIS.

As a requisite for graduation each candidate must present an acceptable thesis, embodying the results of a special research. The subject of the research must lie in one of the branches (other than science) in which the candidate has studied during either of the last two years prior to graduation. The subject must be announced to the President of the University (dependent upon the written approval of the head of the department within which it lies), not later than the beginning of the second term of the Senior year. The completed thesis must be submitted not later than the second Saturday before Commencement Day.

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*Students who have entered with Latin as their preparatory language take History (4) during the Junior year in place of English (7).

ENGLISH COURSE IN PHILOSOPHY.

This Course is intended to meet the wants of such students as desire to make a special study of literary, philosophical, historical and economic subjects. Students electing this Course are advised to begin specializing in some one or more of these subjects as early in the Course as possible, and are required not later than the beginning of the Junior year, to begin specializing in one of these subjects. The Course allows large liberty of elective studies.

NOTE.—The figure in parenthesis, following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FRESHMAN YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.
French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.
History (8) United States.	2.	History (8) United States.	2.	History (8) United States.	2.
Philosophy (7) Logic.	2.	Philosophy (8) Psychology.	2.	Philosophy (8) Psychology.	2.
Military Drill.		Military Drill. Tactics,	2.	Military Drill.	

ELECTIVE.

Five hours a week through the year, chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter. But during his Course he must complete in all at least eight hours in science.

[In case a student offers French or German for admission, he will take as his required language in the Freshman or Sophomore years, the one of these two languages not offered for admission.]

SOPHOMORE YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours. per week.
English (2) Science of Rhetoric.	2.	English (2) Science of Rhetoric.	2.	English (2) Science of Rhetoric.	2.
English (8) Chaucer.	2.	English (8) Literature.	2.	English (8) Literature.	2.
French (2) Prose. or German (4) Literature.	3.	French (2) Lyrics. or German (4) Literature.	3.	French (2) Drama. or German (4) Literature.	3.
Philosophy (9) Ethics.	3.	Philosophy (10) History of Philosophy.	3.	Philosophy (10) History of Philosophy.	3.

Political Science (1) 2.	Political Science (1) 2.	Political Science (1) 2.
Political Economy.	Political Economy.	Political Economy.
Military Drill.	Military Drill.	Military Drill.
	Art of War, 2.	

ELECTIVE.

Five hours a week through the year, chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter.

JUNIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
English (7) Anglo-Saxon.	2.	English (7) Anglo-Saxon.	2.	English (7) Anglo-Saxon.	2.

And each student must elect as his major study English, or Philosophy, or History and Political Science. At least five hours a week through the Junior and Senior years must be given to this major study.

ELECTIVE.

Eight hours a week through the year, chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter.

SENIOR YEAR.

REQUIRED.

Five hours a week in the major study as in the Junior year.

ELECTIVE.

Ten hours a week, chosen from any courses of the Collegiate Department on which the student is qualified to enter.

THESIS.

At the beginning of the Senior year, each student in this Course will take up as thesis work some special line of inquiry within the field of his major study, subject to the approval of the professor in charge of the department, and must devote to it two hours per week, or its equivalent, independently of his other work. The subject, together with a written approval of it by the head of the department within which it lies, must be submitted to the President of the University, not later than the beginning of the second term of the Senior year. The completed thesis must be submitted not later than the second Saturday before Commencement Day.

SCHOOL OF SCIENCE.

STANDING COMMITTEE.

President SCOTT, *Chairman;* Professor BOHANNAN, *Secretary;* Professors ORTON, THOMAS, KELLICOTT, BLEILE, BOWEN and DENNEY.

This School embraces two Courses: the Course in Science, four years in length, and the Course Preparatory to the Study of Medicine, three years in length.

COURSE IN SCIENCE.

The aim of this Course is to give the student not merely a good general knowledge of the various Sciences, but that special and thorough training in some one of them, which results from prolonged study and laboratory work. To this end each student is required during the last half of the Course to specialize his work and to devote at least one-third of his time to one among the several fields in science open to his choice. At the same time the Course is so arranged as to permit him free election, for a considerable part of his work, from other scientific and non-scientific studies.

NOTE.—The figure in parenthesis, following the name of a study, indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Course of Instruction," beginning on page 75.

FRESHMAN YEAR.

REQUIRED.

FIRST TERM.	Hours per week.	SECOND TERM.	Hours per week.	THIRD TERM.	Hours per week.
Botany (2) Systematic.	3.	Botany (2) Cryptogamic.	2.	Zoology (7) Systematic.	3.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.
		Metallurgy (1) Mineralogy.	3.		
French (1) Elementary. or *German (1) Elementary.	5.	French (1) Elementary. or *German (1) Elementary.	5.	French (1) Elementary. or *German (1) Elementary.	5.
General Chemistry (1) Non-metals.	4.	General Chemistry (1) Metals.	2.	General Chemistry (2) Carbon Compounds.	4.
Mathematics (5) Higher Trigonometry.	3.	Mathematics (5) Higher Algebra.	3.	Mathematics (5) Analytical Geometry.	3.
Military Drill.		Military Drill.		Military Drill.	
		Tactics,	2.		

*Students who enter the University with Latin as their preparatory language will take either French or German in the Freshman and Sophomore years; students offering French will take German; students offering German will take French.

SOPHOMORE YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
English (2) Science of Rhetoric.	2.	English (2) Science of Rhetoric.	2.	English (2) Science of Rhetoric.	2.
French (3) Scientific. or *German (2) Scientific.	2.	French (3) Scientific. or *German (2) Scientific.	2.	French (3) Scientific. or *German (2) Scientific.	2.
Physics (2) Mechanics and Heat.	3.	Physics (2) Electricity.	3.	Physics (2) Sound and Light.	3.
Physiology (1) Anatomy.	3.	Physiology (1) Physiology.	3.	Physiology (1) Physiology.	3.
Military Drill.		Military Drill.		Military Drill.	
		Art of War,	2.		

ELECTIVE.

Seven hours per week through the year, chosen from any courses given in the Collegiate Department of the University, with this restriction: At least three hours of the seven shall be in Mathematics or in one of the Sciences in which laboratory instruction is given. The work must be in all cases, such as the student is qualified to take. Included among the elective work of this year is the required work of the Junior and Senior years.

JUNIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Philosophy (1) Psychology.	3.	Philosophy (1) Psychology.	3.	Philosophy (2) Ethics.	3.
Political Science (1) Political Economy.	2.	Political Science (1) Political Economy.	2.	Political Science (1) Political Economy.	2.

ELECTIVE.

Ten hours a week, of which at least five shall be in science; the science to be Mathematics or one in which laboratory instruction is given, and to be continued to the end of the Course. The other five hours may be chosen from any courses given in the Collegiate Department of the University upon which the student is qualified to enter. Included among the elective work of this year is the required work of the Senior year. If a student has anticipated a part or the whole of the required work of the Junior year he shall take a corresponding amount of elective work in addition to the ten hours named above.

SENIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Geology (2) General.	5.	Geology (2) General.	5.	Astronomy (1) Descriptive.	5.

*See note to Freshman year.

ELECTIVE.

Ten hours a week with the same conditions and privileges as in the Junior year. Students who have credits for the required work of the Senior year will elect fifteen hours of work, subject to the conditions indicated for the work of the Junior year.

SPECIAL REQUIREMENT IN THE COURSE IN SCIENCE.

MAJOR STUDY.

Not later than the beginning of the Junior year, each student in Science shall elect a major study, and shall announce his choice to the Secretary of the Science Committee. The major study shall be Mathematics, or one of the sciences in which laboratory instruction is offered in the University, or (with the approval of the Science Committee) two or more of such allied sciences. At least five hours a week, or its equivalent, during the last two years of the student's residence at the University preceding graduation, shall be devoted to the major study; and the work in this study, in case it is a single science, shall be under the direction and control of the professor of that science or in case a group of allied sciences constitute the major study, the work shall be in charge of the professors of those sciences, jointly.

THESIS.

As a requisite for graduation each student must present an acceptable thesis embodying the results of a special research. The line of research must lie within the field of the major study, and is subject to the approval of the professor or professors, having the major study in charge; and the student shall enter on this work not later than the beginning of the Senior year, and shall devote to it not less than two hours a week, or its equivalent, for one year, independently of his other work. The subject of the thesis, together with a written approval of it by the professor, or professors, directing the investigation, must be submitted to the President of the University not later than the beginning of the second term of the Senior year, and the completed thesis must be submitted not later than the second Saturday before Commencement Day. In case two or more students are pursuing the same major study, a joint research and thesis may be made.

COURSE PREPARATORY TO THE STUDY OF MEDICINE.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FIRST YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Botany (4*b*) Medical.	4.	Botany (4*b*) Medical.	2.	Geology (1) Physical Geography.	5.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.
Latin (4) Pharmaceutical.	5.	Latin (4) Pharmaceutical.	5.	Latin (4) Pharmaceutical.	5.
Physics (2) Mechanics and Heat.	3.	Physics (2) Electricity and Magnetism.	3.	Physics (2) Sound and Light.	3.

	Physics (8) 2. Laboratory.	
Zoology (1) 3. Systematic.	Zoology (1) 3. Morphology.	Zoology (1) 3. Entomology.
Military Drill.	Military Drill.	Military Drill.

SECOND YEAR.

First Term. Hours per week.	Second Term. Hours per week.	Third Term. Hours per week.
English (2) 2. Science of Rhetoric.	English (2) 2. Science of Rhetoric.	
French (1) Elementary. or German (1) 5. Elementary.	French (1) Elementary. or German (1) 5. Elementary.	French (1) Elementary. or German (1) 5. Elementary.
Gen'l Chemistry (1) 4. Non-metals.	Gen'l Chemistry (1) 2. Metals.	Gen'l Chemistry (1) 4. Carbon Compounds.
Physiology (1) 3. Anatomy.	Physiology (1) 3. Physiology.	Physiology (1) 3. Physiology.
Political Science (1) 2. Political Economy.	Political Science (1) 2. Political Economy.	Political Science (1) 2. Political Economy.
	Philosophy (8) 2. Psychology.	Philosophy (8) 2. Psychology.
Military Drill.	Military Drill.	Military Drill.

THIRD YEAR.

First Term. Hours per week.	Second Term. Hours per week.	Third Term. Hours per week.
French (3) Scientific. or German (2) 2. Scientific.	French (3) Scientific. or German (2) 2. Scientific.	French (3) Scientific. or German (2) 2. Scientific.
Pharmacy (1*a*) 3. Lectures.	Pharmacy (1*a*) 5. Laboratory.	Pharmacy (1*a*) 5. Laboratory.
Physiology (3) 5. Laboratory.	Physiology (3) 5. Laboratory.	Physiology (3) 5. Laboratory.
Zoology (3) 5. Comparative Anatomy.	Zoology (3) 5. Comparative Anatomy.	Zoology (3) 5. Comparative Anatomy.

THE SCHOOL OF AGRICULTURE.

STANDING COMMITTEE.

President SCOTT, *Chairman;* Professor LAZENBY, *Secretary;* Professors ROBINSON, WEBER, DETMERS, KELLICOTT, BLEILE, KELLERMAN and HUNT.

This School embraces four Courses: The Course in Agriculture and the Course in Horticulture and Forestry, each four years in length; the Short Course in Agriculture, two years in length; and the Course in Dairying, twelve weeks in length.

The aim of the School is to give to young men a general education, and to fit them specially, first, for the pursuit of agriculture and horticulture in a rational manner; second, to fill positions as agriculturists, horticulturists, botanists, and agricultural chemists. To this end the University has provided and is constantly adding such instructional force and material equipment as are needed to give the most thorough and complete training in the subjects coming within the scope of these important branches of industry.

A free scholarship in the Short Course in Agriculture, covering all college dues, is annually granted to one student from each county in the State. Fuller information concerning these scholarships is given on page 28.

COURSE IN AGRICULTURE.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FRESHMAN YEAR.

REQUIRED.

FIRST TERM	Hours per week.	SECOND TERM.	Hours per week.	THIRD TERM.	Hours per week.
Agr'l Chemistry (1) Principles.	5.	Agr'l Chemistry (2) Organic.	5.	Agr'l Chemistry (2) Applications.	5.
Botany (3) Physiological.	5.	Botany (3) Economic.	5.	Botany (3) Vegetable Pathology.	5.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.
Zoology (1) Systematic.	3.	Zoology (1) Morphology.	3.	Zoology (1) Entomology.	3.
Military Drill.		Military Drill.		Military Drill.	
		Tactics.	2.		

SOPHOMORE YEAR.

REQUIRED.

First Term.	Hours Per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Agriculture (2) Breeds of Live Stock.	4.	Agriculture (2) Stock Breeding.	4.	Agriculture (2) Stock Feeding.	4.
Agr'l Chemistry (4) Laboratory.	3.	Agr'l Chemistry (4) Laboratory.	3.	Agr'l Chemistry (4) Laboratory.	3.
Horticulture (1) Elements.	3.	Shop-work (1) and (2) Carpentry, Forging.	3.	Horticulture (1) Elements.	5.
Physiology (1) Anatomy.	3.	Physiology (1) Physiology.	3.	Physiology (1) Physiology.	3.
Veterin'y Medicine (1) Anatomy.	3.	Vetern'y Medicine (1) Anatomy.	5.	Veterin'y Medicine (1) Anatomy.	3.
Drawing (10) Mechanical.	2.				
Military Drill.		Military Drill.		Military Drill.	
		Art of War,	2.		

JUNIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Agriculture (1) Farm Equipments.	3.	Agriculture (1) Soils.	3.	Agriculture (1) Crops.	3.
French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.
Geology (2) General.	5.	Civil Engine'ring (13) Field Measurements.	5.	Zoology (5) Economic Entomology.	3.
History (8) United States.	2.	History (8) United States.	2.	History (8) United States.	2.
Veterin'y Medicine (3) General Pathology.	3.	Veterin'y Medicine (3) Special Pathology.	3.	Veterin'y Medicine (3) Special Pathology.	3.

SENIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Agriculture (4) Animal Husbandry.	4.	Agriculture (4) Dairy.	4.	Agriculture (4) Rural Economy.	4.
Agr'l Chemistry (5) Laboratory.	3.	Agr'l Chemistry (5) Laboratory.	3.	Agr'l Chemistry (5) Laboratory.	3.

ELECTIVE.

Ten hours a week through the year chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter.

THESIS.

As a requisite for graduation each candidate must present an acceptable thesis embodying the results of a special research. The subject must be announced to the

President of the University (dependent upon the written approval of the head of the department within which it lies), not later than the beginning of the second term of the Senior year. The completed thesis must be submitted not later than the second Saturday before Commencement Day.

SHORT COURSE IN AGRICULTURE.

NOTE.—The figure in parenthesis, following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FIRST YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Agr'l Chemistry (1) Principles.	5.	Agr'l Chemistry (2) Organic.	5.	Agr'l Chemistry (2) Applications.	5.
Mathematics (1) Algebra.	5.	Mathematics (3) Geometry.	5.	Botany (1) Elementary.	5.
Physics (1) Elementary.	5.	Physics (1) Elementary.	5.	Geology (1) Physical Geography.	5.
Drawing (10) Mechanical.	2.	Shopwork (1) and (2) Carpentry, forging.	3.	Physiology (2) General.	3.
Military Drill.		Military Drill.		Military Drill.	

SECOND YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Agriculture (1) Farm Equipment.	3.	Agriculture (1) Soils.	3.	Agriculture (1) Crops.	3.
Agriculture (2) Breeds of Live Stock.	4.	Agriculture (2) Stock Breeding. or Agriculture (4) Dairy.	4.	Agriculture (2) Stock Feeding.	4.
Botany (3) Physiological.	5.			Zoology (4) Entomology.	3.
Horticulture (1) Elements.	3.	Horticulture (1) Elements.	3.	Horticulture (1) Elements.	5.
Veterin'y Medicine (3) General Pathology.	3.	Veterin'y Medicine (3) Special Pathology.	3.	Veterin'y Medicine (3) Special Pathology.	3.
		Civil Engineering (13) Field Measurements.	5.		
Military Drill.		Military Drill.		Military Drill.	

COURSE IN DAIRYING.

The Course in Dairying begins each year on the Wednesday following the first day of January and continues twelve weeks. Butter-making, as practiced in the farm dairy and in the creamery, is thoroughly taught. The student performs all necessary operations in the manufacture of butter by these two methods under the guidance of the instructors. In cheese-making the principles are taught with elementary practice.

NOTE.—The figure in parenthesis, following the name of a study, indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

AGRICULTURE (5). Two hours each week for twelve weeks. Dairy farming, breeds, feeding, management.

AGRICULTURE (6). Four half-days each week for eight weeks, and two half-days each week for two weeks. Butter-making, cheese-making, running separator, churning, working butter, etc.

AGRICULTURAL CHEMISTRY (7). Two hours each week for twelve weeks. Milk chemistry and milk testing.

VETERINARY MEDICINE (3*a*). Three lectures each week for six weeks. The common diseases of the dairy cow.

CARE OF THE BOILER AND ENGINE. One lecture each week during six weeks.

SPECIAL LECTURES by prominent dairymen and others.

COURSE IN HORTICULTURE AND FORESTRY.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FRESHMAN YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Agr'l Chemistry (1) Principles.	5.	Agr'l Chemistry (2) Organic.	5.	Agr'l Chemistry (2) Applications.	5.
Botany (3) Physiological.	5.	Botany (3) Economic.	5.	Botany (3) Vegetable Pathology.	5.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.
Zoology (1) Systematic.	3.	Zoology (1) Morphology.	3.	Zoology (1) Entomology.	3.
Military Drill.		Military Drill.		Military Drill.	
		Tactics,	2.		

SOPHOMORE YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Agr'l Chemistry (4) Principles.	3.	Agr'l Chemistry (4) Organic.	3.	Agr'l Chemistry (4) Applications.	3.
English (8) Chaucer.	2.	English (8) Literature.	2.	English (8) Literature.	2.
French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.
Horticulture (1) Elements.	3.	Shop-work (1) and (2) Carpentry, Forging.	3.	Horticulture (1) Elements.	5.
Physiology (1) Anatomy.	3.	Physiology (1) Physiology.	3.	Physiology (1) Physiology.	3.
Drawing (10) Mechanical.	2.				
Military Drill.		Military Drill.		Military Drill.	
		Art of War,	2.		

JUNIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Agriculture (1) Farm Equipment.	3.	Agriculture (1) Soils.	3.	Agriculture (1) Crops.	3.
Geology (2) General.	5.	Civil Engineering (13) Field Measurements.	5.	Zoology (5) Entomology.	5.
History (8) United States.	2.	History (8) United States.	2.	History (8) United States.	2.
Horticulture (2) General.	5.	Horticulture (2) General.	5.	Horticulture (2) General.	5.

ELECTIVE.

Two or three hours a week through the year chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter.

SENIOR YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Horticulture (3) Arboriculture.	3.	Horticulture (3) Forestry.	3.	Horticulture (3) Landscape gardening.	3.
Horticulture (4) Floriculture,	2	Horticulture (4) Floriculture.	2.	Horticulture (4) Floriculture.	2.

ELECTIVE.

Ten hours a week through the year, chosen from any of the courses given in the Collegiate Department of the University upon which the student is qualified to enter.

THESIS.

As a requisite for graduation each candidate must present an acceptable thesis, embodying the results of a special research. The subject must be announced to the President of the University (dependent upon the written approval of the head of the department within which it lies), not later than the beginning of the second term of the Senior year. The completed thesis must be submitted not later than the second Saturday before Commercement Day.

THE SCHOOL OF ENGINEERING.

STANDING COMMITTEE.

President Scott, *Chairman;* Professor Thomas, *Secretary;* Professors Robinson, Lord, Bohannan, Brown, Eggers, Williston, Orton, Jr., and Associate Professor Bradford.

This School comprises the departments represented in the Courses in Civil, Mining, Mechanical and Electrical Engineering, in the Short Course in Mining, in the Course in Industrial Arts, and in the Course in Clayworking and Ceramics.

COURSE IN CIVIL ENGINEERING.

This Course is arranged for students expecting to become surveyors or civil engineers. The plan of the Course is to give (1) a thorough training in mathematics and mechanics, (2) the general principles underlying all branches of civil engineering, (3) the application of the general principles to the several branches of civil engineering. The subjects of land, railroad and topographical surveying are important features, and students can at once begin practical work. In the engineering work special attention is given to iron and steel bridge work, masonry construction and cement testing, road and railroad building and maintenance, water supply and the subject of the collection and disposal of sewage.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FRESHMAN YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Drawing (1) Freehand.	1.	Drawing (1) Freehand.	1.	Drawing (2) Lettering.	2.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.
French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.
Gen'l Chemistry (1) Principles.	4.	Gen'l Chem. (1) & (1*a*) Lectures and Laboratory.	5.	Metallurgy (2) Mineralogy.	3.
Mathematics (6) Trigonometry.	5.	Mathematics (6) Trigonometry and Algebra.	5.	Mathematics (6) Analytical Geometry.	5.
Military Drill.		Military Drill.		Military Drill.	
		Tactics,	2.		

SOPHOMORE YEAR.

First Term.	Hours. per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Civil Engineering (1) Surveying.	6.	Civil Engineering (4) C. E. Drawing.	4.	Civil Engineering (2) Surveying.	6.
Drawing (3) Mechanical.	3.	Drawing (3) Mechanical.	5.	Drawing (3) Mechanical.	3.
French (3) Scientific. or German (2) Scientific.	2.	French (3) Scientific. or German (2) Scientific.	2.	French (3) Scientific. or German (2) Scientific.	2.
Mathematics (7) Analytics and Calculus.	5.	Mathematics (7) Calculus.	5.	Mathematics (7) Calculus.	5.
Physics (2) Mechanics and Heat.	3.	Physics (2) Electricity.	3.	Physics (2) Sound and Light.	3.
Military Drill.		Military Drill.		Military Drill.	
		Art of War,	2.		

JUNIOR YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Civil Engineering (3) Surveying.	4.	Civil Engineering (6) Stereotomy.	4.	Civil Engineering (7) Bridge Strains.	5.
English (3) Advanced Rhetoric.	2.	English (3) Advanced Rhetoric.	2.	English (3) Advanced Rhetoric.	2.
Geology (2) General.	5.	Geology (2) General.	5.	Drawing (7) Photography.	2.
Mathematics (8) Least Squares.	2.	Civil Engineering (5) C. E. Drawing.	3.	Astronomy (2) Mathematical.	4.
Mechan'l Engin'g (6) Mechanics.	5.	Mechan'l Engin'g (6) Mechanics.	5.	Mechan'l Engin'g (7) Strength of Materials.	5.

SENIOR YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours. per week.
Astronomy (2) Mathematical.	3.	Astronomy (2) Mathematical.	2.		
Civil Engineering (8) Bridge Designing.	5.	Civil Engineer'g (14) Laboratory.	2.		
Civil Engineering (9) Masonry.	5.	Civil Engineering (9) Lectures.	5.	Civil Engineering (9) Water Supply.	5.
		Mechan'l Engin'g (2) Laboratory.	3.	Civil Engineering (10) Sanitary Engineering.	5.
Physics (7) Laboratory.	5.	Geology (3) Economic.	5.	Physics (7) Laboratory.	5.

THESIS.

As a requisite for graduation each candidate must present an acceptable thesis, embodying the results of a special study. The subject of the study must lie within the field of Civil Engineering. The subject must be announced to the President of the University (dependent upon the approval of the head of the department), not later than the beginning of the second term of the Senior year, and the completed thesis must be submitted not later than the second Saturday before Commencement Day.

COURSE IN MINING ENGINEERING.

This Course is arranged for students intending to become mining engineers and surveyors, metallurgical or technical chemists. The plan of work, therefore, while keeping mathematics, drawing and engineering prominent, also provides extended work in applied chemistry, chemical analysis, assaying, mineralogy, geology, and surveying with especial application to mines and underground work, while the treatment of ores, both mechanical in ore dressing and chemical in metallurgy, forms an important feature.

Note.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FRESHMAN YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Agr'l Chemistry (1) Principles.	5.	Agr'l Chemistry (3) Analytical.	5.	Metallurgy (2) Mineralogy.	3.
Drawing (1) Freehand.	1.	Drawing (1) Freehand.	1.	Drawing (2) Lettering.	2.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric	2.
French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.
Mathematics (6) Trigonometry.	5.	Mathematics (6 Trigonometry and Algebra.	5.	Mathematics (6) Analytical Geometry.	5.
Military Drill.		Military Drill.		Military Drill.	
		Tactics,	2.		

SOPHOMORE YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Drawing (3) Mechanical.	3.	Drawing (3) Mechanical.	3.	Drawing (3) Mechanical.	3.
English (3) Advanced Rhetoric.	2.	English (3) Advanced Rhetoric.	2.	English (3) Advanced Rhetoric.	2.
French (3) Sc.entific. or German (2) Scientific.	2.	French (3) Scientific. or German (2) Scientific.	2.	French (3) Scientific. or German (2) Scientific.	2.
Mathematics (7) Analytics and Calculus.	5.	Mathematics (7) Calculus.	5.	Mathematics (7) Calculus.	5.
Metallurgy (5) Laboratory.	5.	Metallurgy (5) Laboratory.	5.	Metallurgy (5) Laboratory.	5.
Shop Work (1) Carpentry.	2.	Shop Work (2) Forging.	2.	Shop Work (4) Chipping and Filing.	2.
Military Drill.		Military Drill.		Military Drill.	
		Art of War,	2.		

JUNIOR YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Mechan'l Engin'g (6) Mechanics.	5.	Mechan'l Engin'g (6) Mechanics.	5.	Mechan'l Engin'g (7) Strength of Materials.	5.
Metallurgy (4) Lectures.	5.	Metallurgy (4) Lectures.	5.	Civil Engineering (7) Bridge Strains.	5.
Mine Engineering (4) Mine Surveying.	5.	Metallurgy (6) Assaying.	5.	Metallurgy (3) Determinative Mineralogy.	5.
Physics (2) Mechanics and Heat.	3.	Physics (2) Electricity.	3.	Physics (2) Sound and Light.	3.

SENIOR YEAR.

First Term.	Hours per week.	Second Term	Hours per week.	Third Term.	Hours per week.
Electrical Engin'g (5) Laboratory.	3.	Electrical Engin'g (5) Laboratory.	3.	Electrical Engin'g (5) Laboratory.	3.

Geology (2) 5. General.	Geology (2) 5. General.	Metallurgy (8) 5. Ore Dressing.
Metallurgy (7) 3. Metallurgical Construction.	Geology (3) 5. Economic.	Metallurgy (10) 5. Plans and Specifications.
Mine Engineering (5) 5. Mining Engineering	Mine Engineering (5) 5. Mining Engineering.	Mine Engineering (5) 5. Mining Engineering.
Drawing (7) 2. Photography.		

THESIS.

As a requisite for graduation, each candidate must present an acceptable thesis, embodying the results of a special study. The subject of the study must lie within the field of Metallurgy or of Mining Engineering. The subject must be announced to the President of the University (dependent upon the written approval of the head of the department) not later than the beginning of the second term of the Senior year, and the completed thesis must be submitted not later than the second Saturday before Commencement Day.

SHORT COURSE IN MINING.

This Course is intended for students lacking time and preparation for the full Course and is principally designed for those who have had some practical experience as miners. The work is more elementary in character than in the long course, and is made to apply especially to coal mining.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FIRST YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Mathematics (2) Algebra.	5.	Mathematics (2) Algebra.	5.	Mathematics (2) Algebra.	5.
Mathematics (4) Geometry.	5.	Mathematics (4) Geometry.	5.	Mathematics (4) Trigonometry.	5.
Physics (1) Elementary.	5.	Physics (1) Elementary.	5.	Geology (1) Physical Geography.	5.
Military Drill.		Military Drill.		Military Drill.	

SECOND YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Drawing (1) Freehand.	2.	Drawing (4) Draughting.	3.	Drawing (2) Lettering.	2.
Drawing (3) Mechanical.	3.	Geology (4) Elementary.	5.	Shop Work (2) Forging.	3.
Metallurgy (9) Mineral Chemistry.	5.	Metallurgy (9) Mineral Chemistry.	2.	Metallurgy (9) Mineral Chemistry.	5.
Mine Engineering (1) Mine Surveying.	5.	Mine Engineering (2) Ventilation and Haulage.	5.	Mine Engineering (3) Mine Operating.	5.
Military Drill.		Military Drill.		Military Drill.	

COURSE IN MECHANICAL ENGINEERING.

This Course has for its first object the qualifying of men for the mechanical engineering profession. It aims to embrace preparation for such lines of pursuit as the successful management of machinery in manufacturing establishments; the superintendence of construction; the designing and laying out of machinery plants of mills and factories; the invention of machines for particular purposes, and the designing and drawing of the same, or of the inventions of others, preparatory to construction; the making of calculations or exercising sound judgment respecting strength, shocks, proportion, endurance and suitability of material for specific purposes, as steel in temper, composition metals, woods, etc.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject a full description of which will be found under that name and number in the "Courses of Instruction" beginning on page 75.

FRESHMAN YEAR.

FIRST TERM.	Hours per week.	SECOND TERM.	Hours per week.	THIRD TERM.	Hours per week.
Drawing (1) Freehand.	1.	Drawing (1) Freehand.	1.	Drawing (2) Lettering.	3.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.
French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.
Gen'l Chemistry (1) Principles.	4.	Gen. Chem. (1) & (1*a*) Lectures and Laboratory.	5.	Shopwork (1) Carpentry.	3.
Mathematics (6) Trigonometry.	5.	Mathematics (6) Trigonometry and Algebra.	5.	Mathematics (6) Analytical Geometry.	5.
Military Drill.		Military Drill.		Military Drill.	
		Tactics,	2.		

SOPHOMORE YEAR.

FIRST TERM.	Hours per week.	SECOND TERM.	Hours per week.	THIRD TERM.	Hours per week.
Drawing (3) Mechanical.	4.	Drawing (3) Mechanical.	2.		
English (3) Advanced Rhetoric.	2.	English (3) Advanced Rhetoric.	2.	English (3) Advanced Rhetoric.	2.
French (3) Scientific. or German (2) Scientific.	2.	French (3) Scientific. or German (2) Scientific.	2.	French (3) Scientific. or German (2) Scientific.	2.
Mathematics (7) Analytics and Calculus	5.	Mathematics (7) Calculus.	5.	Mathematics (7) Calculus,	5.
Physics (2) Mechanics and Heat.	3.	Physics (2) Electricity.	3.	Physics (2) Sound and Light.	3.
		Physics (7) Laboratory.	2.	Physics (7) Laboratory.	4.
Shop Work (2) Forging.	3.	Shop Work (4) Chipping.	3.	Shop Work (5) Foundry.	3.
Military Drill.		Military Drill.		Military Drill.	
		Art of War,	2.		

JUNIOR YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Drawing (5) Technical.	3.				
Mechan'l Engin'g (2) Laboratory.	3.	Mechan'l Engin'g (2) Laboratory.	4.	Mechan'l Eng'g (11) Technical Drawing.	5.
Mechan'l Engin'g (3) Mechanism.	2.	Mechan'l Engin'g (3) Mechanism.	5.	Mechan'l Engin'g (3) Mechanism.	4.
Mechan'l Engin'g (6) Mechanics.	5.	Mechan'l Engin'g (6) Mechanics.	5.	Mechan'l Engin'g (7) Strength of Materials.	5.
Physics (7) Laboratory.	2.	Physics (7) Laboratory.	5.	Civil Engineer'g (7) Bridge Strains.	5.
Shop Work (6) Machinery.	3.				
Mathematics (11) Differential Equations.	1.				

SENIOR YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Mechan'l Engin'g (2) Laboratory.	5.	Mechan'l Engin'g (2) Laboratory.	3.	Mechan'l Engin'g (2) Laboratory.	5.
Mechan'l Engin'g (4) Invention and Designing.	3.	Geology (4*a*) Dynamical and Structural.	5.	Mechan'l Engin'g (5) Invention and Designing.	5.
Mechan'l Engin'g (8) Thermodynamics.	5.	Mechan'l Engin'g (9) Prime Movers.	5.	Mechan'l Engin'g (10) Machinery.	5.
Metallurgy (4) Lectures.	5.	Metallurgy (4) Lectures.	5.	Drawing (7) Photography.	2.

THESIS.

As a requisite for graduation, each candidate must present an acceptable thesis, embodying the results of a special study. The subject of such study must lie within the field of Mechanical Engineering. The subject must be announced to the President of the University (dependent upon the written approval of the head of the department) not later than the beginning of the second term of the Senior year, and the completed thesis must be submitted not later than the second Saturday before Commencement Day.

COURSE IN ELECTRICAL ENGINEERING.

The object of this Course is to prepare students for the various pursuits in which the applications of electricity are prominent. Physics, especially theoretical and applied electricity, and mechanical engineering are naturally the leading subjects of the Course. General theory is treated in ample breadth, and is tested by experiments in well equipped laboratories. The laboratories are so conducted as to afford the student a degree of facility in the use of instruments and machinery only acquired by continued practice.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FRESHMAN YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Drawing (1) Freehand.	1.	Drawing (1) Freehand.	1.	Drawing (2) Lettering.	3.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric	2.
French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.	French (1) Elementary. or German (1) Elementary.	5.
Gen'l Chemistry (1) Principles.	5.	Gen. Chem. (1) & (1*a*) Lectures and Laboratory.	5.	Shop Work (1) Carpentry.	3.
Mathematics (6) Trigonometry.	5.	Mathematics (6) Trigonometry and Algebra.	5.	Mathematics (6) Analytical Geometry.	5.
Military Drill.		Military Drill.		Military Drill.	
		Tactics,	2.		

SOPHOMORE YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Drawing (3) Mechanical.	4.	Drawing (3) Mechanical.	2.		
English (3) Advanced Rhetoric.	2.	English (3) Advanced Rhetoric.	2.	English (3) Advanced Rhetoric.	2.
Mathematics (7) Analytics and Calculus.	5.	Mathematics (7) Calculus.	5.	Mathematics (7) Calculus.	5.
Physics (2) Mechanics and Heat.	3.	Physics (2) Electricity.	3.	Physics (2) Sound and Light.	3.
Physics (3) Advanced.	2.	Physics (3) Advanced.	2.	Physics (3) Advanced.	2.
		Physics (5) Laboratory.	3.	Physics (5) Laboratory.	5.
Shopwork (2) Forging.	3.	Shopwork (4) Chipping.	2.	Shopwork (5) Machinery.	2.
Military Drill.		Military Drill.		Military Drill.	
		Art of War,	2.		

VOLUNTARY.

French (3) 2, (Scientific Reading); or German (2) 2, (Scientific Reading).

JUNIOR YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Drawing (5) Technical.	3.				
Mechan'l Engin'g (3) Mechanism.	2.	Mechan'l Engin'g (3) Mechanism.	5.	Mechan'l Engin'g (2) Laboratory.	4.
Mechan'l Engin'g (6) Mechanics.	5.	Mechan'l Engin'g (6) Mechanics.	5.	Mechan'l Engin'g (7) Strength of Materials.	5.
Physics (6) Laboratory.	4.	Physics (6) Laboratory.	5.	Physics (6) Laboratory.	5.
Physics (4) Electricity and Magnetism.	3.	Shopwork (6) Machinery.	4.	Mechan'l Engin'g (11) Technical Drawing.	5.
Mathematics (8) Least Squares.	2.				

SENIOR YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Electrical Engin'g (2) Electrical Machinery.	5.	Electrical Engin'g (2) Electrical Machinery.	5.	Electrical Engin'g (2) Electrical Machinery.	3.
Electrical Engin'g (3) Designing and Drawing.	3.	Electrical Engin'g (3) Designing and Drawing.	3.	Electrical Engin'g (3) Designing and Drawing.	5.
Electrical Engin'g (4) Laboratory.	5.	Electrical Engin'g (4) Laboratory.	5.	Electrical Engin'g (4) Laboratory.	5.
Mechan'l Engin'g (8) Thermodynamics.	5.	Mechan'l Engin'g (9) Prime Movers.	5.	Mechan'l Engin'g (10) Machinery.	5.

THESIS.

As a requisite for graduation, each candidate must present an acceptable thesis embodying the results of a special study. The subject of such study must lie within the field of Electrical Engineering, and must be announeed to the President of the University (dependent upon the written approval of the professor in charge) not later than the beginning of the second term of the Senior year. The completed thesis must be submitted not later than the second Saturday before Commencement Day.

COURSE IN INDUSTRIAL ARTS.

The primary object of this Course is to provide facilities for training those who wish to become teachers of manual training. The Course is also designed for those who purpose entering the various branches of manufacture and industry, not as engineers but as practical managers, superintendents or business men. The plan of the Course is to combine with a general science training, a large amount of drawing and shop work, in which the underlying principles and methods employed in the various branches of industry are dwelt on. The aim is educational as well as professional—the training of the mind as well as the hand. Considerable liberty of election is permitted and by a proper choice of the elective studies offered, the student may obtain a training which will open the way to a wide range of occupations.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Course of Instruction," beginning on page 75.

FRESHMAN YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Drawing (1) Freehand.	1.	Drawing (1) Freehand.	1.	Drawing (1) Freehand.	1.
Drawing (8) Mechanical.	2.	Drawing (8) Mechanical.	2.	Drawing (8) Mechanical.	2.
English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.	English (1) Practical Rhetoric.	2.
Mathematics (6) Trigonometry.	5.	Mathematics (6) Trigonometry and Algebra.	5.	Mathematics (6) Analytical Geometry.	5.
Shopwork (1) Carpentry.	3.	Shopwork (1) Pattern Making.	3.	Shopwork (1) Pattern Making.	3.
Military Drill.		Military Drill.		Military Drill.	
		Tactics,	2.		

ELECTIVE.

At least four hours for the year chosen from the following subjects. If the student elects French or German, he must pursue it for two years:

Botany (2) Systematic.	2.	Gen'l Chem. (1) Non-metals and metals. and Gen'l Chem. (2) Carbon Compounds. and Metallurgy (1) Mineralogy.	4.	French (1) Elementary.	5.
Agr'l Chem. (1) Principles. and Agr'l Chem. (3) Analytical. and Agr'l Chem. Special.	5.			German (1) Elementary.	5.
				Zoology (1) Systematic.	3.

SOPHOMORE YEAR.

REQUIRED.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Drawing (9) Mechanical.	3.	Drawing (9) Mechanical.	3.	Drawing (9) Mechanical.	3.
English (3) Advanced Rhetoric.	2.	English (3) Advanced Rhetoric.	2.	English (3) Advanced Rhetoric.	2.
Physics (2) Mechanics and Heat.	3.	Physics (2) Electricity.	3.	Physics (2) Sound and Light.	3.
Shopwork (2) Forging.	3.	Shopwork (2) Forging.	3.	Shopwork (2) Forging.	3.
Military Drill.		Military Drill.		Military Drill.	
		Art of War,	2.		

ELECTIVE.

Seven hours a week for the year, chosen from any of the following subjects that the student is prepared to enter. But if one of the courses in Chemistry has not been elected in the Freshman year, it must be taken this year; and if French or German has been elected in the Freshman year, it must be continued through this year.

Agr'l Chemistry (3) Laboratory.	5.	French (3) Scientific.	2.	Physics (3) Advanced.	2.
Drawing (1) or (3) Freehand or Mechanical.	4.	German (2) Scientific.	2.	Physiology (1) Anatomy and Physiology.	3.
English (8) Literature.	2.	Mathematics (7) Calculus.	5.		

Or any of the elective studies of the preceding year which have not already been taken.

JUNIOR AND SENIOR YEARS.

During the Junior and Senior years Shopwork and Drawing will be required, together with Mechanism, Mechanics, Physical Laboratory, Constitutional History,

Political Economy and Philosophy. Work may be elected also from the following subjects: Mathematics, Physical Laboratory, Chemical Laboratory, History, English, Philosophy, Freehand Drawing and Water Colors, Wood Carving and Clay Modeling, and the elective studies of the preceding years not already taken.

COURSE IN CLAYWORKING AND CERAMICS.

This Course has been provided in response to the urgent appeals to the Legislature on the part of representatives of various clay industries of the State. The Course is designed to give to those who are engaged or who expect to be engaged in the manufacture of clay products an opportunity to learn in the shortest time possible, the rudiments of the sciences which are most likely to be useful to them in their work.

Chemical work is made the main feature of the Course. It is supplemented by elementary physics, geology and mathematics. The Ceramic Laboratory work in the second year of the Course will teach students to apply the knowledge gained from their studies before leaving college, and will thus open the way towards the creation of a class of trained observers in the practical problems of the industry, which will be of the greatest value to the improvement and progress of the art.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FIRST YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Physics (1) Elementary.	5.	Physics (1) Elementary.	5.	Geology (1) Physical Geography.	5.
Metallurgy (9) Mineral Chemistry.	5.	Ceramics (1) General Principles.	5.	Metallurgy (5) Laboratory.	5.
Mathematics (2) Algebra.	5.	Mathematics (4) Geometry.	5.	Shopwork,	5.
Military Drill.		Military Drill.		Military Drill.	

SECOND YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Ceramics (2) Analysis of Clays.	5.	Ceramics (2) Analysis of Pottery and Glass.	5.	Ceramics (2) Analysis of Glazes and Enamels.	5.
Ceramics (3) Principles of Clay-working.	5.	Ceramics (3) Manufacture of Brick.	5.	Ceramics (3) Manufacture of Pottery.	5.
Geology (2) General.	5.	Geology (3) Economic.	5.	Drawing (11) Mechan.cal.	5.
Military Drill.		Military Drill.		Military Drill.	

THE SCHOOL OF PHARMACY.

STANDING COMMITTEE.

President SCOTT, *Chairman;* Professor KAUFFMAN, *Secretary;* Professors NORTON, BLEILE and KELLERMAN.

COURSE IN PHARMACY.

The aim of this Course is to impart that general and special knowledge which is necessary to the attainment of a high standing in the profession of pharmacist. The graduates of this Course are fully prepared to pass the State examination required by law for the practice of Pharmacy in this and other States.

NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FIRST YEAR.

FIRST TERM.	Hours per week.	SECOND TERM.	Hours per week.	THIRD TERM.	Hours per week.
Gen'l Chemistry (1) Non-metals.	4.	Gen'l Chemistry (1) Metals.	2.	Gen'l Chemistry (2) Carbon Compounds.	4.
		Metallurgy (1) Mineralogy.	3.	Botany (1) Elementary.	5.
Latin (4) Pharmaceutical.	5.	Latin (4) Pharmaceutical.	5.	Latin (4) Pharmaceutical.	2.
Physics (1) Elements.	5.	Physics (1) Elements.	5.	Geology (1) Physical Geography.	5.
Miltary Drill.		Military Drill.		Military Drill.	

SECOND YEAR.

FIRST TERM.	Hours per week.	SECOND TERM.	Hours per week.	THIRD TERM.	Hours per week.
Botany (3) Physiological.	5.	Botany (4) Medical.	2.	Physiology (5) Microscopy.	2.
Gen'l Chemistry (3) Analytical.	5.	Gen'l Chemistry (3) Analytical.	5.	Gen'l Chemistry (3) Analytical.	5.
Pharmacy (1) General.	3.	Pharmacy (2) Laboratory.	5.	Pharmacy (2) Laboratory.	5.
Physiology (1) Anatomy.	3.	Physiology (1) Physiology.	3.	Physiology (1) Physiology.	3.
Military Drill.		Military Drill.		Military Drill.	

THIRD YEAR.

FIRST TERM	Hours per week.	SECOND TERM.	Hours per week.	THIRD TERM.	Hours per week.
Gen'l Chemistry (4) Analytical.	5.	Gen'l Chemistry (4) Analytical.	5.	Gen'l Chemistry (4) Analytical.	5.
		Gen'l Chemistry (5) Prox. Organic Analysis.	3.	Gen'l Chemistry (5) Toxicology.	2.

Pharmacy (3) Laboratory.	5.	Pharmacy (3) Laboratory.	3.	Pharmacy (3) Laboratory.	5.
Pharmacy (5) Materia Medica.	3.	Pharmacy (5) Materia Medica.	3.	Pharmacy (5) Materia Medica and Therapeutics.	3.

THESIS.

As a requisite for graduation, each candidate must present an acceptable thesis embodying the results of a special study and research. The subject must be announced to the President of the University (dependent upon the written approval of the proper authorities), not later than the beginning of the second term of the third year of the Course, and the completed thesis must be submitted not later than the second Saturday before Commencement Day.

THE SCHOOL OF VETERINARY MEDICINE.

STANDING COMMITTEE.

President SCOTT, *Chairman;* Professor DETMERS, *Secretary;* Professors WEBER, BLEILE, KELLERMAN, HUNT, and KAUFFMAN.

The object of this Course is to provide the scientific and professional instruction necessary for practicing the profession of Doctor of Veterinary Medicine. Besides the twelve courses of instruction in the professional and scientific branches of Veterinary Medicine, which are taught by the Professor of Veterinary Medicine and his assistants, the Course includes instruction in the other sciences which bear directly upon the various branches of Veterinary Medicine. These sciences are taught by the professors of those subjects and their assistants in other Departments of the University and include Chemistry, Physiology, Histology, Pharmacy, Breeds of Live Stock, Stock-Breeding and Botany.

A diploma of the School of Veterinary Medicine of the Ohio State University is accepted by the Ohio State Board of Veterinary Examiners in lieu of an examination.

COURSE IN VETERINARY MEDICINE.

NOTE.—The figure in parenthesis, following the name of a study indicates the number of the course in that subject, a full description of which will be found under that name and number in the "Courses of Instruction," beginning on page 75.

FIRST YEAR.

FIRST TERM.	Hours per week.	SECOND TERM.	Hours per week.	THIRD TERM.	Hours per week.
Agr'l Chemistry (1) Principles.	5.	Agr'l Chemistry (2) Organic.	5.	Agr'l Chemistry (2) Applications.	5.
Physiology (1) Anatomy.	3.	Physiology (1) Physiology.	3.	Physiology (1) Physiology	3.
Physiology (4) Histology.	5.	Physiology (4) Histology.	5.	Physiology (4) Histology.	5.
Veterin'y Medicine (1) Veterinary Anatomy.	3.	Veterin'y Medicine (1) Veterinary Anatomy	5.	Veterin'y Medicine (1) Veterinary Anatomy.	3.
Military Drill.		Military Drill.		Military Drill.	

SECOND YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Agriculture (2) Breeds of Live Stock.	4.	Agriculture (2) Stock Breeding.	4.	Agriculture (2) Stock Feeding and Hygiene.	4.
Pharmacy (1) General.	3.	Pharmacy (4) Prescription Writing.	2.	Veterin'y Medicine (5) Obstetrics.	5.
Veterin'y Medicine (3) General Pathology.	3.	Veterin'y Medicine (3) Special Pathology.	3.	Veterin'y Medicine (3) Special Pathology.	3.
Veterin'y Medicine (4) Surgical Diseases.	5.	Veterin'y Medicine (4) Surgical Diseases.	5.	Veterin'y Medicine (6) Prin. Horse Shoeing.	3.
Veterin'y Medicine (8) Clinic.	6.	Veterin'y Medicine (8) Clinic.	6.	Veterin'y Medicine (8) Clinic.	6.
Veterin'y Medicine (9) Pharmacology.	3.	Veterin'y Medicine (9) Pharmacology.	3.		
Military Drill.		Military Drill.		Military Drill.	

THIRD YEAR.

First Term.	Hours per week.	Second Term.	Hours per week.	Third Term.	Hours per week.
Botany (4*a*) Medical.	2.	Botany (4*a*) Medical.	2.	Thesis,	2.
Veter'y Medicine (3*a*) Special Pathology and Therapeutics.	3.	Veter'y Medicine (3*a*) Special Pathology and Therapeutics.	3.	Veter'y Medicine (10) General Veterinary Therapeutics.	5.
Veterin'y Medicine (7) Bacteriology.	3.	Veter'y Medicine (11) Forensic.	4.	Veter'y Medicine (11) Forensic.	1.
Veterin'y Medicine (8) Clinical Practice.	6.	Veterin'y Medicine (8) Clinical Practice.	6.	Veterin'y Medicine (8) Clinical Practice.	6.
Veter'y Medicine (12) Exterior.	4.	Veterin'y Medicine (2) Anatomical Laboratory.	3.		

THESIS.

As a requisite for graduation, each candidate must present an acceptable thesis embodying the results of a special study, involving, if possible, some original research. The subject must be announced to the President of the University (dependent upon the written approval of the proper authorities) not later than the second term of the third year of the Course, and the completed thesis must be submitted not later than the second Saturday before Commencement Day.

Courses of Instruction.

The instruction given in the Collegiate Department of the University embraces a wide range of subjects. Detailed information concerning the courses offered in any subject will be found under the proper head, in accordance with the following classification:

Agriculture.
Agricultural Chemistry.
Anatomy. (See Physiology, Zoology and Veterinary Medicine.)
Ancient Art. (See Greek.)
Astronomy.
Bacteriology, (See Physiology and Veterinary Medicine.)
Botany.
Civil Engineering.
Clayworking and Ceramics.
Drawing.
Electrical Engineering. (See Physics and Electrical Engineering.)
Elocution and Oratory.
English and Rhetoric.
Entomology. (See Zoology.)
French. (See Romance Languages.)
General Chemistry
Geology.
German.
Greek.
History.
Histology. (See Physiology.)
Horticulture.
Industrial Arts. (See Shop Work.)
Italian. (See Romance Languages.)
Latin.
Mathematics.
Mechanical Engineering.
Metallurgy.
Mine Engineering.
Military Science and Tactics.
Pathology. (See Veterinary Medicine.)
Pharmacy.
Philology. (See English and Rhetoric.)
Philosophy.
Physics and Electrical Engineering.
Physiology.
Political Science.
Rhetoric. (See English and Rhetoric.)
Romance Languages.
Shopwork.
Spanish. (See Romance Languages.)
Veterinary Medicine.
Zoology and Entomology.

NOTE.—When any study mentioned in the following pages is *required* in any of the Courses outlined on pages 44 to 74, that fact is noted. *All* studies mentioned in the following pages are *elective* for students prepared to undertake them; subject, however, to the conditions indicated on pages 44 to 74.

AGRICULTURE.

1. AGRICULTURE—Lectures and Recitations. M, F, at 2½; W, 2½ to 4½.

FIRST TERM.—Three times a week. Farm Equipment.

SECOND TERM.—Three times a week. Soils.

THIRD TERM.—Three times a week. Farm Crops.

Text books and books of reference for this course: First term—Elliott's Farm Drainage, Waring on Drainage, Stewart on Irrigation, Haupt's A Move for Better

Roads, Thomas's Farm Implements and Machinery, Sanders's Barn Buildings. Second Term—Storer's Agriculture, Morrow and Hunt's Soils and Farm Crops, Stockbridge's Rocks and Soils, Wahnscheffe's Scientific Examination of Soils, Johnson's How Crops Feed. Third Term—Storer's Agriculture, Morrow and Hunt's Soils and Farm Crops, Brewer's Monograph on Cereals, Tenth Census, Vol. III. Constant reference is made to books on special crops and to the reports and bulletins of Experiment Stations.

Professor HUNT.

Required in the Junior year of the Courses in Agriculture and Horticulture and Forestry, and the second year of the Short Course in Agriculture.

2. DOMESTIC ANIMALS—Lectures and Recitations. M, Tu, Th, F, at 3½.

FIRST TERM.—Four times a week. Breeds of Live Stock.

SECOND TERM.—Four times a week. Stock Breeding.

THIRD TERM.—Four times a week. Stock Feeding and Hygiene.

Text books and books of reference used by students in the preparation of the work: First Term—Curtis's Horses, Cattle, Sheep and Swine, Low's Domesticated Animals, Sanders's Breeds of Live Stock, Wallace's Live Stock of Great Britain, with reference to special classes and breeds. Second Term—Miles's Stock Breeding, Warfield's Cattle Breeding, Darwin's Plants and Animals under Domestication. Third Term—Armsby's Cattle Feeding, Stewart's Feeding Animals, Experiment Station Reports and Bulletins.

Professor TOWNSHEND, Professor HUNT.

Required in the Sophomore year of the full Course in Agriculture, in the second year of the Short Course in Agriculture; and in the second year of the Course in Veterinary Medicine.

4. ADVANCED AGRICULTURE.—Lectures and Recitations. M, Tu, Th, F, at 1½.

FIRST TERM.—Animal Husbandry and Exterior. The care, management, and adaptation of animals to specific purposes. Four times a week.

Professor HUNT.

SECOND TERM.—Butter Making and Cheese Making. Laboratory Practice. Four times a week.

Assistant Professor GOODRICH, Mr. HERRICK, Mr. BAILEY.

THIRD TERM.—Rural Economy. The business of farming, past and present. Four times a week.

Professor HUNT.

Required in the Senior year of the full Course in Agriculture; elective in the Senior year of the Course in Horticulture and Forestry.

The first and third terms are given in alternate years and will not be given in 1895-6.

5. DAIRY FARMING—Lectures and Recitations. Twice a week.

SECOND TERM.—Breeds, Breeding, Feeding, selection and judging of dairy stock, equipment and management of dairy farms.

Professor HUNT.

Required in the Course in Dairying.

6. BUTTER MAKING AND CHEESE MAKING—Laboratory Practice in running separator, churning, working butter, etc., manufacture of cheese.
SECOND TERM.—Four half-days each week.
Assistant Professor GOODRICH, Mr. HERRICK, Mr. BAILEY.

Required in the Course in Dairying.

For facilities see LABORATORIES AND EQUIPMENT.

AGRICULTURAL CHEMISTRY.

1. AGRICULTURAL CHEMISTRY.

FIRST TERM.—Five times a week. Principles of Chemistry and Chemical Nomenclature. Lectures and Text-book for three or four weeks, M, Tu, W, Th, F, at 9¼. For remainder of term, Chemistry of Non-metals, twice a week, Tu, Th, at 9¼. Laboratory Practice, Qualitative Analysis, three times a week. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

Professor WEBER.

Required in the first year of the Short Course in Agriculture, in the Freshman year of the Course in Agriculture, of the Course in Horticulture and Forestry, of the Course in Mining Engineering, and in the first year of the Course in Veterinary Medicine.

2. AGRICULTURAL CHEMISTRY.

SECOND TERM.—Organic Chemistry, twice a week, Tu, Th, at 9¼. Laboratory Practice, Qualitative Analysis, three times a week. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

THIRD TERM.—Application of Chemistry to Agriculture, twice a week, Tu, Th, at 9¼. Laboratory Practice, Quantative Analysis, three times a week. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

Professor WEBER.

Required in the Freshman year of the Course in Agriculture, and Horticulture and Forestry, and in the first year of the Short Course in Agriculture and of the Course in Veterinary Medicine.

In the class room Norton's Chemistry is used. As a guide in qualitative analysis, Weber's Select Course in Qualitative Analysis is employed. In the third term the lectures embrace the following topics: Organic and inorganic ingredients of plants; essential and non-essential ingredients; sources of plant food, soil and air; nature of soil, mechanical portion, nutritive portion, assimilable and reserve plant food; soil exhaustion and amelioration; barnyard manure and commercial fertilizers; feeding stuffs and feeding rations.

The laboratory work of the third term begins with the quantitative analysis of simple salts, as sodium sulphate and potassium chloride, and continues with the analysis of limestones, clays, soils, fertilizers, feeding-stuffs water, milk, butter, cheese and syrup, including the determination of cane sugar, grape sugar and dextrine.

3. ANALYTICAL CHEMISTRY.

SECOND TERM.—Five times a week. Laboratory Practice. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

Professor WEBER.

Required in the Freshman year of the Course in Mining Engineering.

4. AGRICULTURAL CHEMISTRY—Laboratory Practice three times a week throughout the year. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

In the laboratory the special line of work laid out covers the official methods of analyzing fertilizers, feeding-stuffs and the dairy products; also the analysis of fruits, vegetables, alcoholic liquors, etc.

Professor WEBER.

Required in the Sophomore year of the Courses in Agriculture, and Horticulture and Forestry.

5. AGRICULTURAL CHEMISTRY—Lectures and Laboratory Work three times a week throughout the year. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

In the lectures special attention will be paid to such industries as are related to agriculture, as the manufacture of butter, cheese, starch, sugar, glucose, vinegar, etc.

Professor WEBER.

Required in the Senior year of the Course in Agriculture.

6. AGRICULTURAL CHEMISTRY—Lectures and Laboratory Work five times a week throughout the year. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

Professor WEBER.

7. MILK CHEMISTRY AND MILK TESTING—Lectures and Laboratory Practice.

SECOND TERM.—Two hours each week.

Professor WEBER.

Required in the Course in Dairying.

For facilities see LABORATORIES AND EQUIPMENT.

ANATOMY.

[See PHYSIOLOGY, ZOOLOGY AND VETERINARY MEDICINE.]

ANCIENT ART.

[See GREEK.]

ASTRONOMY.

1. DESCRIPTIVE ASTRONOMY—Lectures and Recitations. M, Tu, W, Th, F, at 9¼.

THIRD TERM.—Five times a week. Young's Elements of Astronomy.

Assistant Professor LORD.

Required in the Senior year of the Course in Science.

2. ASTRONOMY AND GEODESY—Lectures and Field Practice.

THIRD TERM.—Four times a week. M, Tu, W, Th, at 11½. Lectures on the determination of Time, Latitude, Longitude and Azimuth. The student is required to determine each co-ordinate from his own observations.

FIRST TERM.—Three times a week. M, W, F, 11½. Lectures on Geodetic Surveying supplemented with actual practice in the field, including base line measurement, observation of the angles of a triangulation net, and the determination of the astronomical co-ordinates.

SECOND TERM.—Twice a week. Tu, Th, at 11½. The observations of the preceding term are reduced and discussed by the method of Least Squares; the most probable value of the angles and sides determined and the Latitudes, Longitudes and Back Azimuths are computed by the method of the United States Coast and Geodetic Survey.

Books of reference: Doolittle, Chauvenet, and the reports of the Coast Survey.

Assistant Professor LORD.

The third term is required in the Junior year of the Course in Civil Engineering, and the first and second terms are required in the Senior year of the Course in Civil Engineering.

3. THEORETICAL ASTRONOMY—Lectures and Computations. M, Tu, W, Th, F, at 1½.

FIRST TERM.—Five times a week. The theory of the undisturbed motion of a Planet or Comet, and the calculation of ephemerides.

SECOND TERM.—Five times a week. Parabolic Orbits from three complete observations.

THIRD TERM.—Orbits from three complete observations, including the eccentricity; and Orbits from four observations.

Assistant Professor LORD.

4. THEORETICAL ASTRONOMY—Lectures and Computations. M, Tu, W, Th, F, at 2½.

FIRST TERM.—Five times a week. Definitive Orbits of Comets.

SECOND TERM.—Five times a week. Special Perturbations and Mechanical Quadrature.

THIRD TERM.—Five times a week. Orbits of Double Stars.

In Astronomy 3 and 4, the student will read Watson's Theoretical Astronomy and Theoretische Astronomie von Dr. W. Klinkerfeus; in addition to which he will compute his own orbits from observations published in the Astronomische Nachrichten, Astronomical Journal and other standard journals.

Assistant Professor LORD.

Astronomy 3 and 4 are elective to all students who have had the Calculus.

BACTERIOLOGY.

[See PHYSIOLOGY AND VETERINARY MEDICINE.]

BOTANY

1. ELEMENTARY BOTANY.

THIRD TERM.—Five times a week. Structural and Systematic Botany. Gray's Revised Manual and Lessons; Kellerman's Elements. M, Tu, W, Th, F, at 10¼.

Professor KELLERMAN, Mr. WILCOX.

Required in the first year of the Pharmacy Course and in the Short Course in Agriculture. This Course is a prerequisite to each of the Courses named below.

2. GENERAL BOTANY—Lectures and Field Work.

FIRST TERM.—Three times a week. Systematic Botany and Vegetable Physiology. Tu, Th, at 9¼, F, at 10¼.

SECOND TERM.—Twice a week. Cryptogamic Botany. Tu, Th, at 9¼.

Books of reference: Gray's Revised Manual, Bennett and Murray's Cryptogamic Botany, Bessey's Botany, Kellerman's Elements.

Professor KELLERMAN.

Required in Freshman year of the Science Course.

3. SPECIAL BOTANY—Lectures, Laboratory and Field Work. M, Tu, W, Th, F, at 8¼. Laboratory open Tu, Th, 8¼ to 4½.

FIRST TERM.—Five times a week. Physiological Botany.

SECOND TERM—Five times a week. Economic Botany.

THIRD TERM.—Five times a week. Vegetable Pathology.

Goodale's Physiological Botany, Henderson's Hand-book of Plants, Bessey's Botany, Smith's Diseases of Field and Garden Crops.

Professor KELLERMAN, Mr. WILCOX.

Required in the Freshman year of the Courses in Agriculture, and Horticulture and Forestry; the first term is required in the second year of the Short Course in Agriculture and the Course in Pharmacy.

4. MEDICAL BOTANY (Pharmaceutical)—Lectures and Laboratory Work.

SECOND TERM—Twice a week. Tu, Th, at 1½. Laboratory open Th, F, 1½ to 4½.

Professor KELLERMAN, Mr. WILCOX.

Text-book: Maisch's Organic Materia Medica.

Required in the second year of the Course in Pharmacy. Course 4 must be preceded by the first term of Course 3.

4*a*. MEDICAL BOTANY (Veterinary)—Lectures and Laboratory Work. Laboratory open Th, F, 8¼ to 4½.

FIRST TERM.—Twice a week.

SECOND TERM.—Twice a week.

Professor KELLERMAN, Mr. WILCOX

Required in the third year of the Course in Veterinary Medicine.

4*b*. MEDICAL BOTANY—Lectures and Laboratory Work. Laboratory open Th, F, 8¼ to 4½.

FIRST TERM.—Four times a week.

SECOND TERM.—Twice a week.

Professor KELLERMAN, Mr. WILCOX.

Required in the first year of the Course Preparatory to the Study of Medicine.

5. ADVANCED LABORATORY WORK—Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

THREE TERMS.—Five hours a week.

Professor KELLERMAN.

Course 5 must be preceded by Course 2 or 3.

5*a*. LABORATORY WORK—Laboratory open Tu, Th, 8¼ to 4½.

THREE TERMS.—Two or Three hours a week.

Professor KELLERMAN.

For facilities see LABORATORIES AND EQUIPMENT.

CIVIL ENGINEERING.

1. LAND SURVEYING—Recitations and Field Work. M, Tu, W, Th, F, 1½ to 4½.

FIRST TERM.—Six times a week. Johnson's Theory and Practice of Surveying. Mr. KEMMLER.

Required in the Sophomore year of the Course in Civil Engineering.

2. RAILROAD SURVEYING—Recitations and Field Work. M. Tu, W, Th, F, 1½ to 4½.

THIRD TERM.—Six times a week. Searle's Field Engineering.

Mr. KEMMLER.

Required in the Sophomore year of the Course in Civil Engineering.

3. TOPOGRAPHICAL SURVEYING—Lectures, Tu, Th, F, at 10½. Field Work and Drawing, M, Tu, W, Th, F, 1½ to 4½.

FIRST TERM—Four times a week. Johnson's Surveying used for reference.

Mr KEMMLER.

Required in the Junior year of the Course in Civil Engineering.

4. TECHNICAL DRAWING—Platting, Pen and Colored Topography. Tu, W, Th, 1½ to 4½.

SECOND TERM.—Four times a week.

Professor BROWN.

Required in the Sophomore year of the Course in Civil Engineering.

5. TECHNICAL DRAWING—Working Drawings and Blue-Printing.

SECOND TERM.—Three times a week. M, Tu, 1½ to 4½.

Mr. KEMMLER.

Required in the Junior year of the Course in Civil Engineering

6. STEREOTOMY—Recitations, Drawing and Model Cutting. M, Tu, W. Th, at 11½.

SECOND TERM.—Four times a week. Warren's Stereotomy.

Mr. KEMMLER.

Required in the Junior year of the Course in Civil Engineering.

7. BRIDGE STRAINS—M, Tu, W, Th, F, at 1½.

THIRD TERM.—Five times a week. The class is divided into two sections—The students in Civil Engineering (Section A) have recitations and use Du Bois's Strains in Framed Structures as a text-book. The Students in Mining and Mechanical Engineering (Section B) have recitations, lectures and drawing. The work is modified to meet the special needs of these students and includes the elements of designing.

Professor BROWN, Mr. KEMMLER.

Required in the Junior year of the Courses in Civil, Mining and Mechanical Engineering.

8. BRIDGE DESIGNING—Lectures and Drawing. M, Tu, W, Th, F, at 10½.

FIRST TERM.—Five times a week. Part II. of Du Bois's Strains in Framed Structures, used for reference.

Professor BROWN.

Required in the Senior year of the Course in Civil Engineering.

9. CIVIL ENGINEERING—Recitations and Lectures. M, Tu, W, Th, F. at 8½.

FIRST TERM.—Five times a week. Baker's Masonry Construction.

SECOND TERM.—Five times a week. Section A. Lectures on Highways, Municipal Engineering, River and Sea Coast Improvements, Canals, Railways,and Irrigation. Section B. Recitations and Lectures on Railway Location, using Wellington's Economic Theory of Railway Location as a text-book. Students may elect between the two sections.

THIRD TERM.—Five times a week. Fanning's Water Supply.

Professor BROWN.

Required in the Senior year of the Course in Civil Engineering.

10. SANITARY ENGINEERING—Lectures. M, Tu, W, Th, F, at 9½.

THIRD TERM.—Five times a week.

Professor BROWN.

Required in the Senior year of the Course in Civil Engineering.

13. FIELD MEASUREMENTS—Recitations and Field Work.

SECOND TERM.—Five times a week. Hodgman and Bellows's Manual of Land Surveying.

Mr. KEMMLER.

Required in the Junior year of the Courses in Agriculture and Horticulture and Forestry and in the Second year of the Short Course in Agriculture.

14. CIVIL ENGINEERING—Laboratory.

SECOND TERM.—Two times a week. The work consists principally of cement testing and adjustment of engineering instruments.

Professor BROWN.

Required in the Senior year of the Course in Civil Engineering.

For facilities, see LABORATORIES AND EQUIPMENT.

CLAY WORKING AND CERAMICS.

1. ELEMENTARY CHEMISTRY—Lectures and Laboratory Work. M, Tu, W, Th, F, at 9¼.

Five times a week.—Continuing the work begun in Metallurgy 9 and completing qualitative analysis of the bases.

Professor ORTON, JR.

Required in the second term of the first year of the Course in Clay Working and Ceramics.

2. ADVANCED CHEMISTRY—Laboratory Work. M, Tu, W, Th, F, at 8¼.

FIRST TERM.—Five times a week. Analysis of clays, felspars and cements.

SECOND TERM.—Five times a week. Analysis of pottery bodies.

THIRD TERM.—Five times a week—Analysis of glazes, enamels and ceramic colors.

Professor ORTON, JR.

Required in the Second year of the Course in Clay Working and Ceramics.

3. CERAMIC LABORATORY—M, Tu, W, Th, F, at 1½.

FIRST TERM.—Lectures twice a week and Laboratory Work three times a week, covering the origin and properties of clays, chemical and mineralogical composition, mechanical analysis and methods of testing physical qualities of clays.

SECOND TERM.—Lectures and Laboratory as before, covering the compounding of clay mixtures or bodies for brick, refractory material or pottery.

THIRD TERM.—Lectures and Laboratory as before, covering the compounding of glazes, enamels and ceramic colors. Practical experiments are required, involving the successful production and application of this class of bodies.

Professor ORTON, JR.

Required in the Second year of the Course in Clay Working and Ceramics.

DRAWING.

1. FREEHAND DRAWING—Outline Drawing from Copy and Wooden Models.

Charcoal and crayon and pen drawing from copy and plaster casts.

THREE TERMS.—Once a week. Two hours' drawing. 9¼ to 11¼, Sec. I., M; Sec. II., Tu; Sec. III., W; Sec. IV., Th; Sec. V., F. 1½ to 3½, Sec. VI., M; Sec. VII., W; Sec. VIII., F.

Mr. TAYLOR, Mr. LEWIS.

Required in the Freshman year of the Industrial Arts Course; the first and second terms of the Freshman year of the Courses in Engineering, the first term of the second year of the Short Mining Course; the first term of the first year of the Short Course in Agriculture; and the first term of the Sophomore year of the Courses in Agriculture and Horticulture and Forestry.

2. LETTERING—Lectures and Practice. M, Tu, W, Th, F, 1½ to 4½.

THIRD TERM.—Twice a week (four hours' practice) in the Civil and Mining Engineering Courses. Three times a week (six hours' practice) in the Mechanical and Electrical Engineering Courses. In the Mechanical and Electrical Engineering Courses projection drawing is commenced. *Lectures*—Care and manipulation of draughting instruments; proper construction of letters; proper construction of titles; principles of projection. *Practice*—Drawing a series of progressive plates.

Associate Professor BRADFORD, Mr. FRENCH.

Required in the Freshman year of the Courses in Engineering and in the second year of the Short Mining Course.

3. MECHANICAL DRAWING—Lectures, Recitations and Practice. Lecture, Sec I., Tu at 10¼, Sec. II., F at 10¼. Drawing, Tu, Th, 9¼ to 11¼; M, Tu, W, Th, F, 1½ to 4½.

FIRST TERM.—Three times a week in the Civil and Mining Engineering Courses. Text-book: Faunce's Mechanical Drawing. One hour lecture and recitation. Four hours' practice in drawing a series of progressive plates. Four times a week in the Mechanical and Electrical Engineering Courses. Text-book: Faunce's Mechanical Drawing and Descriptive Geometry. One hour lecture and recitation. Six hours' practice in drawing a series of progressive plates.

SECOND TERM.—Five times a week in Civil Engineering Course. Three times a week in the Mining Engineering and Industrial Arts Course. Twice a week in the Mechanical and Electrical Engineering Courses. Text-book: Church's Descriptive Geometry and Shades, Shadows and Perspective. From four to six hours' practice in drawing a series of progressive plates.

THIRD TERM.—Three times a week. Text-book: Church's Shades, Shadows and Perspective. One hour lecture and recitation. Four hours' practice in drawing plates, using the technical colors to represent different materials.

Associate Professor BRADFORD, Mr. FRENCH.

Required in the Sophomore year oft he Engineering and Industrial Arts Courses and in the first term, second year, of the Short Mining Course.

4. DRAUGHTING AND BLUE-PRINTING—Lectures and Practice. Tu, Th, 1½ to 4½.

SECOND TERM.—Three times a week (six hours' drawing).

Associate Professor BRADFORD.

Required in the Second year of the Short Mining Course.

5. TECHNICAL DRAWING—Lectures and Practice. Th, F, 1½ to 4½.

FIRST TERM.—Three times a week. Lectures on rules and methods for detail drawing, tracing, blue-printing, machine designing and practice in making

same favorably to present the form, dimensions, etc., to the workman in practice. Line shading of drawings.

Associate Professor BRADFORD.

Required in the Junior year of the Courses in Mechanical and Electrical Engineering.

7. PHOTOGRAPHY—Lectures and Practice.

FIRST TERM.—Twice a week, M, Tu, 1½ to 4½ (four hours' practice). *Lectures.*—Optics of photography; chemistry of photography; exposing and developing; printing; orthochromatic photography; lantern slides; applications of photography. *Practice*—Out-door photography; interior photography; flash-light photography; copying; lantern slides; printing; instantaneous photography; applications.

THIRD TERM.—Same work as first term. Th, 1½ to 4½.

Associate Professor BRADFORD.

Required in the Senior year, first term, of the Course in Mining Engineering, in the third term, Senior year, of the Course in Mechanical Engineering, and in the third term, Junior year, of the Course in Civil Engineering.

8. MECHANICAL DRAWING—Lectures and Practice. Tu, Th, 1½ to 3½.

THREE TERMS.—Twice a week (four hours' practice). *Lectures*—Instruments and materials. Construction of letters and titles and principles of projection. *Practice*—Drawing a series of progressive plates in geometric drawing, lettering and elementary projection drawing.

Associate Professor BRADFORD, Mr. FRENCH.

Required in the Freshman year of the Industrial Arts Course.

9. MECHANICAL DRAWING.—Lectures and Practice.

THREE TERMS.—Three times a week. One hour lecture and recitation. Four hours' practice. M, W, F, 1½ to 3½.

Required in the Sophomore year of the Industrial Arts Course.

Associate Professors BRADFORD, Mr. FRENCH.

10. MECHANICAL DRAWING—Lectures and Practice. M, W, 1½ to 3½.

FIRST TERM.—Twice a week (four hours' practice). This is a brief course arranged for the students in Agriculture.

Required in the Sophomore year of the four-year Course in Agriculture, and in the first year of the Short Course.

Associate Professor BRADFORD, Mr. FRENCH.

11. MECHANICAL DRAWING—Lectures and Practice.

THIRD TERM.—Five times a week. One hour lecture. Eight hours' practice. M, Tu, W, Th, F, 1½ to 3½.

Required in the second year of the Course in Clayworking and Ceramics.

Associate Professor BRADFORD.

For facilities, see LABORATORIES AND EQUIPMENT.

ELECTRICAL ENGINEERING.

[See PHYSICS AND ELECTRICAL ENGINEERING.]

ELOCUTION AND ORATORY.

1. PRINCIPLES—Twice a week.

FIRST AND SECOND TERMS.—Study of the Vocal organs and muscles. Calisthenics; respiration; articulation; pronunciation; emphasis; vocal culture for purity of voice; theoretical study of the principles of gesture and position; practice in the technique of action; study of the vocal elements: —quality, force, form, degree and stress, with their various combinations in expression; reading and recitation of short extracts illustrating principles.

Text-book: Fulton and Trueblood's Practical Elocution.

Professor Fulton.

2. PRINCIPLES, Continued—Twice a week.

FIRST AND SECOND TERMS.—Vocal culture for strength, compass, flexibility and duration of voice; physical development; technique of action, continued; planes, direction, distance, extension and zones; positions, attitudes and movements of body; conception and invention of action; study of the vocal elements—time, quantity, pause, movement and pitch, degree, change and melody; illustrative readings, and the application of all elements to a few selections entire.

Text-book: The Practical Elocution.

Professor FULTON.

NO E.—The work in Elocution and Oratory has been made a Department of the University, to begin in September, 1895.

ENGLISH AND RHETORIC.

I. RHETORIC.

1. PRACTICAL RHETORIC—Recitations and Prescribed Readings. Twice a week through the year.

Text-books: Scott and Denney's Paragraph-Writing, Genung's Practical Rhetoric. Essays. Sec. I, M, W, at 3½; Sec. II, Tu, Th, at 9¼; Sec. III, Tu, Th, at 2½; Sec. IV, Tu, Th, at 3½; Sec. V, hours to be arranged.

Professor DENNEY, Mr. TAYLOR.

Required in the Freshman year of all four-year Courses, and in the first year of the Course Preparatory to the Study of Medicine.

2. SCIENCE OF RHETORIC—Lectures, Recitations and Prescribed Readings. Twice a week through the year. Tu, Th, at 10¼.

FIRST TERM.—Principles of Style. A study of the stylistic peculiarities of English prose writers. Text-book: Genung's Rhetorical Analysis. Essays.

SECOND TERM.—Questions in Higher Rhetoric. Reading and discussion of standard works on Rhetoric with reports on readings. Essays.

THIRD TERM.—Principles of Rhetorical Criticism. Reading and discussion of standard works in criticism with reports on readings. Essays.

Professor DENNEY.

Required in the Sophomore year of the Courses in Arts, Philosophy and Science. The first two terms are required in the second year of the Course Preparatory to the Study of Medicine.

3. ADVANCED RHETORIC—Lectures, Recitations and Prescribed Readings. Twice a week through the year. M, W, at 10¼.

FIRST TERM.—Principles of Style. A study of the characteristics of writings on technical subjects. Text-book: Genung's Rhetorical Analysis. Reports on the engineering magazines. Essays.

SECOND TERM.—Principles of Construction. A study of logical structure. Reports on the engineering magazines. Essays.

THIRD TERM.—Principles of Presentation. A study of the methods of presenting technical subjects. Reports on the engineering magazines. Essays.

Professor DENNEY.

Required of Juniors in Civil Engineering, and of Sophomores in all other Courses in Engineering.

4. ADVANCED COMPOSITION—Practice and Criticism, with occasional Lectures. Twice a week through the year. M, W, at 1½.

A practical course, for advanced students, in writing under close criticism,—designed to stimulate original production. The work will be changed from year to year, and will be selected from the following subjects: (a) The sketch and the short story; (b) rapid writing and editorial work; (c) criticism and book reviewing; (d) poetics and metrical exercises; (e) the essay in its various types; (f) the speech in its various types; (g) the making of briefs and arguments; (h) the debate.

Professor DENNEY.

Course 4 must be preceded by course 1, must be preceded or accompanied by course 2, and is open only to those who receive special permission.

5. PROSE WRITING—Practice and Criticism, with occasional Lectures. Twice a week through the year. Sec. I, Tu, Th, at 2½. Sec. II, M, W, at 1½.

Section I is a special class in newspaper work open only to students regularly employed on the college or city papers. Section II is open to those who have credit for course 4 and desire to continue the work of that course.

Professor DENNEY.

II. ENGLISH PHILOLOGY.

6. ADVANCED COURSE—Lectures, Readings and Reports. Twice a week. Tu, Th, at 1½.

Reading of longer texts in Early and Middle English, with reports on collateral investigations in English Philology. Lectures on Historical English Grammar.

Professor DENNEY.

Course 6 must be preceded by course 7.

7. ELEMENTARY COURSE—Recitations and Lectures. Twice a week, M, W at 2½.

Old English. Prose and Poetry. Recitations from Sweet's Anglo-Saxon Primer and Sweet's Anglo-Saxon Reader. Lectures on the Formation and Development of the English Language.

Professor DENNEY.

Required in the Junior year of the English Course in Philosophy. Required in the Junior year of the Modern Language Course in Philosophy for those students who enter the University with German as their preparatory language.

III. ENGLISH LITERATURE.

8. A GENERAL SURVEY of English Literature from the time of Chaucer. Recitations, Reports and Lectures. Twice a week through the year. Tu, Th; Sec. I at 9¼; Sec. II at 3½.

Professor BARROWS.

Required in the Sophomore year of the Courses in Arts, Philosophy and Horticulture and Forestry, and must precede or accompany all other courses in this Department.

10. THE DRAMA to the closing of the Theatres. Lectures, Reports and Recitations. Three times a week through the year. M, W, F, at 8½.

Professor BARROWS.

12. THE DRAMA since the Restoration—Recitations, Reports and Lectures. Three times a week through the first term. M, W, F, at 2½.

THE NOVEL—Three times a week through the second and third terms. M, W, F, at 2½.

Professor BARROWS.

15. FROM SPENCER TO MILTON, exclusive of the Drama—Lectures, Recitations and Reports. Twice a week through the year. Tu, Th, at 2½.

Professor BARROWS.

[In this course, omitted in 1895–6, special attention is given to the English Bible and the great religious writers.]

16. FROM DRYDEN TO JOHNSON—Recitations and Lectures. Twice a week through the first half-year.

AMERICAN LITERATURE—Recitations and Lectures. Twice a week through the second half-year.

Professor BARROWS.

17. FROM COWPER TO THE PRESENT TIME, exclusive of the Drama and of Fiction—Recitations Lectures and Reports. Three times a week through the year.

Professor BARROWS.

[Omitted in 1895–6.]

18. GRADUATE SEMINARY—Topics to be assigned. Open to competent graduates and to undergraduates who have taken, with credit, courses 8, 10 and two others.

Professor BARROWS.

ENTOMOLOGY.

[See ZOOLOGY AND ENTOMOLOGY.]

FRENCH.

[See ROMANCE LANGUAGES.]

GENERAL CHEMISTRY.

1. ELEMENTARY CHEMISTRY—Lectures and Recitations.

FIRST TERM.—Four times a week. Chemistry of the non-metals. Norton's Chemistry. M, Tu, W, Th, at 10½.

SECOND TERM.—Twice a week. Chemistry of the metals. Norton's Chemistry. Tu, Th, at 10½.

Professor NORTON.

Required in the Freshman year of the Courses in Science, and Civil, Mechanical and Electrical Engineering, in the first year of the Course in Pharmacy; optional in the Freshman year of the Courses in Arts and Philosophy. Required in the second year of the Course Preparatory to the Study of Medicine.

1*a*. ELEMENTARY CHEMISTRY—Laboratory.

SECOND TERM.—Three times a week.

Mr. RITCHEY.

Required in the Freshman year of the Courses in Civil, Mechanical and Electrical Engineering.

2. ELEMENTARY CHEMISTRY—Lectures and Recitations.

THIRD TERM.—Four times a week. M, T, W, Th, at 10½. Chemistry of the carbon compounds.

Professor NORTON.

Required in the Freshman year of the Course in Science, and in the first year of the Course in Pharmacy; optional in the Freshman year of the Courses in Arts and Philosophy.

3. ANALYTICAL CHEMISTRY—Lectures and Laboratory Work. Qualitative Analysis. Three times a week through the year, credit five hours. Laboratory open M, Tu, W, Th, F, 8½ to 4½.

FIRST TERM.—Reactions in the "dry way" and determination of twenty-five unknown substances.

SECOND TERM.—Reactions in the "wet way." Bases.

THIRD TERM.—Same continued. Seventy-five unknown substances. Acids begun. Text-books for the course: O'Brine's Laboratory Guide; Prescott's Qualitative Analysis; Wills's Tables.

Professor NORTON, Assistant Professor MCPHERSON.

Required in the second year of the Course in Pharmacy.

4. ANALYTICAL CHEMISTRY—Lectures and Laboratory Work. Three times a week through the year, credit five hours. Quantitative Analysis. Laboratory open M, Tu, W, Th, F, 8½ to 4½.

FIRST TERM.—Quantitative analysis begun.

SECOND TERM.—Gravimetric analysis of known compounds.

THIRD TERM.—Same, with volumetric analysis and special work. Textbooks for the course: Clowes and Coleman's Quantitative Analysis; Sutton's Volumetric Analysis.

Professor NORTON, Assistant Professor MCPHERSON.

Professor Norton lectures weekly on the work in hand.

This course must be preceded by course 3, and is required in the third year of the course in Pharmacy.

5. CHEMISTRY—Lectures and Laboratory.

FIRST TERM.—Once a week. Stoichiometry. Thorpe's Problems. M, at 11½.

SECOND TERM.—Three times a week. Tu, Th, at 11½. Proximate organic analysis. Prescott's Proximate Organic Analysis. Laboratory Th, 1½ to 4½.

THIRD TERM.—Twice a week. M, W, F, at 11½. Toxicology. Tanner's Outlines of Poisons. Laboratory F, 2½ to 4½.

Assistant Professor MCPHERSON.

The second and third terms are required in the third year of the Course in Pharmacy.

6. ANALYTICAL CHEMISTRY.

Advanced Chemistry and Research. Three times a week through the year, credit five hours. Laboratory open M, Tu, W, Th, F, 8½ to 4½.

Professor NORTON, Assistant Professor MCPHERSON.

This course must be preceded by courses 4 and 5. The studies of the year will include ultimate organic analyses; determination of vapor densities and molecular weights; preparation of chemically pure substances, inorganic and organic; thesis work, and such practical exercises as the student may desire in analysis of water, minerals and manufactured products.

Reference books: Watt's Dictionary; Gmelin's Handbook; Handwoerterbuch der Chemie, Roscoe and Schorlemmer, Graham-Otto, Plattner; Allen's Commercial Analysis; Prescott's Organic Analysis; Crooke's Select Methods; Mohr's Volumetric Analysis; Fresenius's Zeitschrift; Chemical News; Fresenius's Quantitative Analysis.

For facilities, see LABORATORIES AND EQUIPMENT.

GEOLOGY.

1. PHYSICAL GEOGRAPHY—Lectures and Recitations.

THIRD TERM.—Five times a week. M, Tu, W, Th, F, at 8½. Geikie's Elementary Lessons, supplemented by lectures, map drawing, and the study of geographical models.

Miss BASCOM.

Required in the first year of the Course in Pharmacy, the Short Course in Agriculture, the Short Course in Mining, the Course Preparatory to the Study of Medicine, and the Course in Clayworking and Ceramics.

2. GENERAL GEOLOGY—Lectures. M, Tu, W, Th, F, at 9½.

FIRST TERM.—Five times a week. Subjects: Cosmical Geology, Lithological Geology, Dynamical and Structural Geology. Books of reference used by students in preparation of their work: Green's Physical Geology Geikie's Text-book of Geology, Le Conte's Elements of Geology, Hunt's Chemical Geology, Daubree's Geologie Experimentale, etc., etc.

SECOND TERM.—Five times a week. Subjects: Paleontological Geology, Historical Geology. Books of reference used by students in preparation of their work: Nicholson's Paleontology, Zittel's Paleontologie, Ohio Geological Reports, Paleontology of New York, etc.

Professor ORTON.

Required in the Senior year of the Courses in Science and Mining Engineering, and in the first term of the Junior year of the Courses in Civil Engineering, Agriculture, and Horticulture and Forestry. The first term is required in the second year of the Course in Clayworking and Ceramics.

3. ECONOMIC GEOLOGY—Lectures. M, Tu, W, Th, F, at 10½.

SECOND TERM.—Five times a week. Subjects: 1. Economic materials of stratified rocks, clays, limes, cements, coals, iron ores, etc., etc., phosphates, petroleum. 2. Economic materials derived from veins and igneous rocks, gold, silver, copper, mercury, etc., etc. Gems. Books of reference used by students in preparation of their work: Publications of U. S. Geological Survey, State Geological Surveys, Phillips' Ore Mining, etc.

Professor ORTON.

Required in the Senior year of the Courses in Civil and Mining Engineering, and in the second year of the Course in Clayworking and Ceramics.

4. ELEMENTARY GEOLOGY—Lectures and Recitations. M, Tu, W, Th, F, at 11½.

SECOND TERM.—Five times a week. Text-book: Le Conte's Class Book of Geology.

Miss BASCOM.

Required in the second year of the Short Mining Course.

4*a*. DYNAMICAL AND STRUCTURAL GEOLOGY—Lectures. M, Tu, W, Th, F, at 2½.

SECOND TERM.—Five times a week.

Professor ORTON.

Required in the Senior year of the Course in Mechanical Engineering.

5. PALEONTOLOGY—Museum Work. Museum open M. Tu, W, Th, F, 1½ to 3½.

Determination of groups of Ohio fossils.

Professor ORTON.

6. PETROGRAPHY, I—Laboratory and Lectures. Twice a week through the year. Th, F. 1½ to 3½.

FIRST TERM.—Optical crystallography with practical exercises.

SECOND TERM.—Practical determination of rock-forming minerals, macroscopically and microscopically.

THIRD TERM.—Study of the igneous rocks in the hand specimen and thin section.

Miss BASCOM.

The Sturtz rock collection and Voigt and Hochgesang thin sections of typical minerals and rocks will be carefully studied. Books of reference: Michel Levy; Les Minneaux des Roches; Rosenbusch: Mikroskopische Physiographie der Petrographisch wichtigen mineralien, 3d ed., Mikroskopische Physiographie der Massigen Gesteine, 2d, ed.; Teall's British Petrography; Spottiswoode "Polarization of Light," etc., etc.

Prerequisites, Chemistry, 1; Metallurgy, 1. (Mineralogy and Crystallography.)

7. PETROGRAPHY, II—Laboratory and Lectures. M, Tu, W, Th, F, 1½ to 3½. Five times a week through two years.

FIRST YEAR.—Same as course 6.

SECOND YEAR—Study of the igneous rocks, the crystalline schists and the metamorphic rocks.

Miss BASCOM.

Books of reference as in course 6, with free use of the French, German and English petrographical literature and publications on the crystalline schists and metamorphic rocks.

Prerequisites as in course 6, with the addition of Geology 2.

GERMAN.

1. ELEMENTARY GERMAN.

THREE TERMS.—Five times a week. M, T, W, Th, F. Sec. I at 8¼; Sec. II at 1½; Sec. III at 2½.

Practical German Grammar—Thomas. Reading: Preparatory German Reader, Van Daell; Der Besuch im Carcer-Eckstein, ed. Maynard; Soll und Haben, Freitag, ed. Bultmann.

Mr. MESLOH.

Required in the Freshman year of the Modern Language Course in Philosophy. Optional in the Freshman year of the Latin and English Courses in Philosophy, in the Courses in Science, Civil, Mining, Mechanical and Electrical Engineering and in the Course in Industrial Arts. Optional also in the Sophomore year in the Course in Horticulture and Forestry; in the Junior year of the Course in Agriculture; in the second year of the Course Preparatory to the Study of Medicine; in the Sophomore, Junior and Senior years of the Courses in Arts and Philosophy.

2. SCIENTIFIC READING.

THREE TERMS.—Twice a week. Tu, Th. Sec. I at 9¼; Sec. II at 3½.

Science Reader, Gore. Gesetze der Naturerscheinungen, Pinner. After these two general books are finished the selections from books or periodicals will be adapted to the specialties of the students. This course is open to students who have had course 1.

Mr. MESLOH.

Required in the Sophomore year in the Courses in Science, Civil, Mining and Mechanical Engineering and Industrial Arts, and in the third year in the Course Preparatory to the Study of Medicine for those who took German I. Optional in the Course in Electrical Engineering.

4. GERMAN LITERATURE.

THREE TERMS.—Three times a week. M, W, F, at 3½.

Lectures on the outlines of German literature. Reading of selections from German poetry, composition and conversation. Balladen und Romanzen, ed. Buchheim; Die Deutsche Lyrik, ed. Buchheim. This course is open to students who have had course 1.

Professor EGGERS.

Required in the Sophomore year of the Modern Language Course in Philosophy for students admitted without German; and in the Freshman year of the same course for students admitted on German. Optional in the Sophomore, Junior and Senior years of the Courses in Science and Latin Philosophy; and in the Junior and Senior years of the Course in Arts; in the Junior year of the Course in Horticulture and Forestry; in the Senior year of the Course in Agriculture.

5. THE GERMAN DRAMA AND GERMAN PROSE.

THREE TERMS.—Three times a week. Hour to be arranged.

Lectures upon the development of the German drama. Reading: Extracts from early drama; extracts from Schiller's Räuber; Schiller's Wilhelm Tell; Göthe's Iphigenia. Lectures upon the development of German prose. Selections from the prose of Luther, Lessing, Schiller, Göthe and Heine. Composition and conversation. Open to students who have had course 4.

Professor EGGERS.

Required in the Junior year of the Modern Language Course for students admitted without German; and in the Sophomore year of the same course for those admitted on German. Optional in the Senior year of the Course in Arts; in the Junior or Senior year of the Courses in Science, Latin and English Philosophy; for students who have had courses 1 and 4 in the Senior year of the Course in Horticulture and Forestry.

6. FAUST AND MIDDLE HIGH GERMAN.

THREE TERMS.—Three times a week. Hour to be arranged.

Reading: Faust I, and parts of II; Middle High German Primer, ed. Wright; extracts from Walter von der Vogelweide; Niebelungenlied or Gudrun. Lectures on the development of the German language.

This course can be taken only with the approval of the Professor and must be preceded by, at least, courses 1 and 4.

Professor EGGERS.

GREEK.

1. ELEMENTARY GREEK—Recitations. M, Tu, W, Th, F, at 1½.

FIRST TERM.—Five times a week. White's Beginner's Greek Book.

SECOND TERM.—Five times a week. Beginner's Greek Book, continued.

THIRD TERM.—Five times a week. Xenophon's Anabasis (Goodwin and White, revised edition).

Professor SMITH.

Required in the Freshman year of the Course in Arts.

2. XENOPHON, HERODOTUS, HOMER—Recitations and Lectures. M, W, F, at 8½.

FIRST TERM.—Three times a week. Xenophon's Memorabilia; exercises in Greek prose composition.

SECOND TERM.—Three times a week. Herodotus, Book VIII. Epochs of Greek History (Pennell's Ancient Greece).

THIRD TERM.—Three times a week. Homer's Odyssey. Studies in Greek literature.

Professor SMITH.

Required in the Sophomore year of the Course in Arts.

3. GREEK HISTORY, PHILOSOPHY AND ORATORY—Recitations, Essays and Lectures. M, W, F, at 9½.

FIRST TERM.—Three times a week. Thucydides, Book VII (Smith). Lectures on Attic history.

SECOND TERM.—Three times a week. Plato's Apology of Socrates (Dyer). Essays in Greek philosophy.

THIRD TERM.—Three times a week. Demosthenes's Philippics. Lectures on the Attic orators.

Professor SMITH.

Required in the Junior year of the Course in Arts.

4. EPIC POETRY, DRAMA, SATIRE—Recitations and Lectures. M, W, F, at 11½.

FIRST TERM.—Three times a week. Homer's Iliad, the first six books (Seymour or Keep). Lectures on Epic poetry.

SECOND TERM.—Three times a week. Sophocles's Antigone. Lectures on the Greek drama.

THIRD TERM.—Three times a week. Lucian's Timon. Selections from New Testament.

Professor SMITH.

Required in the Senior year of the Course in Arts.

5. ANCIENT ART—Lectures. Tu, Th, at 2½.

FIRST TERM.—Twice a week. The development of ancient architecture in Egypt, Assyria, Persia and Asia Minor.

SECOND TERM.—Twice a week. Greek architecture and sculpture, illustrated from the monuments.

THIRD TERM.—Twice a week. Roman architecture. The beginnings of Mediævalism.

Professor SMITH.

Course 5 is given in alternate years, and will be offered in 1896-7.

HISTORY.

1. MEDIÆVAL HISTORY—Recitations and Assigned Readings. Twice a week. Tu, Th, at 1½.

THREE TERMS.—Duruy's History of the Middle Ages, and assigned readings on special topics, with a series of introductory lectures on early history.

Assistant Professor SIEBERT.

Required in the Sophomore year of the Modern Language Course in Philosophy.

2. MODERN HISTORY, AND HISTORY OF CIVILIZATION—Recitations, Lectures and Assigned Readings. Three times a week. M, W, F, at 3½.

FIRST AND SECOND TERMS.—Modern History. Duruy's Modern History and assigned readings on special topics.

THIRD TERM.—History of European Civilization. Guizot's History of Civilization in Europe, with lectures and assigned topics.

Assistant Professor SIEBERT.

Required in the Junior year of the Latin Course in Philosophy.
It is advisable, though not required, that this course be preceded by course 1.

3. POLITICAL AND CONSTITUTIONAL HISTORY OF ENGLAND—Recitations, Lectures, Collateral Reading. Three times a week. M, W, F, at 11½.

THREE TERMS.—Lectures; Gardiner's Student's History of England.

Assistant Professor SIEBERT.

Required in the Senior year of the Latin Course in Philosophy.

4. CONSTITUTIONAL AND POLITICAL HISTORY OF THE UNITED STATES—Lectures Recitations and Collateral Readings. Twice a week. Tu, Th, at 10½.

THREE TERMS.—Hart's Formation of the Union; Wilson's Division and Reunion.

Professor KNIGHT, Mr. WILGUS.

Required in the Junior year of the Arts Course and the Latin Course in Philosophy, and for those students in the Modern Language Course in Philosophy who enter with Latin as their preparatory language.

5. SEMINARY IN AMERICAN HISTORY—Two hours a week through the year. Hours to be arranged.

This course is designed to afford the student an opportunity for protracted investigation of methods of historical research and of a few special subjects in American history, under the personal supervision of the instructor, as to time and method of investigation.

Professor KNIGHT.

Course 5 must be preceded by course 4 or course 8, and is open only to Juniors and Seniors.

6. PERIOD OF THE PROTESTANT REFORMATION—Recitations, Lectures and Collateral Readings. Three times a week. M, W, F, at 1½.

FIRST TERM.—Häusser's Era of the Reformation.

Assistant Professor SIEBERT.

Course 6 must be preceded by course 1 or 2.

7. FRENCH REVOLUTION—Recitations, Lectures and Assigned Readings. Three times a week. M, W, F, at 1½.

SECOND AND THIRD TERMS.—Fyffe's History of Modern Europe.

Assistant Professor SIEBERT.

Course 7 must be preceded by course 1 or 2.

8. POLITICAL HISTORY OF THE UNITED STATES—Recitations and Topical Reports. Twice a week. Sec. I Tu, Th, at 10½; Sec. II Tu, Th, at 2½.

THREE TERMS.—Hart's Formation of the Union. Wilson's Division and Reunion.

Assistant Professor SIEBERT.

Required in the Junior year of the Course in Agriculture, and of the Course in Horticulture and Forestry, in the Freshman year of the English Course in Philosophy, and for those students in the Modern Language Course in Philosophy who enter with German as their preparatory language.

HISTOLOGY.

[See PHYSIOLOGY.]

HORTICULTURE.

1. ELEMENTS OF HORTICULTURE—Lectures and Practical Work in laboratory, greenhouse, gardens, orchard, ornamental grounds and forest.

FIRST TERM—Three times a week. General subjects: Location for horticultural work, preparation of soil, draining and irrigation, fertilizers, tools and implements, buildings, etc. M, W, F, at 9¼.

SECOND TERM.—Three times a week. General subjects: Methods of propagation, pruning and training, weeds and injurious insects, fungus diseases, etc. M, W, F, at 8¼.

THIRD TERM.—Five times a week. Practical lessons in germination, seeding, transplanting, budding, grafting, cross-fertilizing, etc. M, Tu, W, Th, F, at 8¼.

Professor LAZENBY.

Required in the Sophomore year, first and third terms, of the Course in Agriculture, and Horticulture and Forestry, and throughout the second year of the Short Course in Agriculture.

2. GENERAL HORTICULTURE—Lectures and Practical Work.

FIRST TERM.—Five times a week. Pomology and Viticulture. Books of reference: Warder's Pomology; Downing's Fruits and Fruit Trees of America; Thomas's American Fruit Culturist; Barry's Fruit Garden; Fuller's Grape Culturist; Bailey's Field Notes on Apple Culture. M, Tu, W, Th, F, at 8¼.

SECOND TERM.—Five times a week. Vegetable gardening and seed-growing. Books of reference: Henderson's Gardening for Profit; Quinn's Money in the Garden; Brill's Seed Growing; Horticulturist's Rule Book. M, Tu, W, Th, F, at 9¼.

THIRD TERM.—Five times a week. Small fruit culture. Books of reference: Fuller's Small Fruit Culturist, and various special works. M, Tu, W, Th, F, at 1½.

Professor LAZENBY.

Required in the Junior year of the Course in Horticulture and Forestry.

3. ARBORICULTURE, FORESTRY AND LANDSCAPE GARDENING—Lectures and Practical Work. M, W, F, at 10¼.

FIRST TERM.—Three times a week. Arboriculture. General subjects: Use of trees for shelter, shade and ornament; methods of propagation, culture and management; history of varieties, etc.

SECOND TERM.—Three times a week. Forestry. General subjects: Influence of forests upon soils, crops and climate; value of trees for timber; how to improve existing woodland; establishment and management of plantations of forest trees, etc.

THIRD TERM.—Three times a week. Landscape gardening.

Professor LAZENBY.

Required in the Senior year of the Course in Horticulture and Forestry.

4. FLORICULTURE—Lectures and Practical Work. Tu, Th, at 10¼.

FIRST TERM.—Twice a week. Elements of Floriculture. General subjects: Propagation and management of house plants, ferneries, wardian cases, climbing vines, flowering bulbs, etc., etc.

SECOND TERM.—Twice a week. Commercial Floriculture. Structure and management of greenhouses, etc., etc.

THIRD TERM.—Twice a week. Amateur or home flower and ornamental gardening.

Professor LAZENBY.

Required in the Senior year of the Course in Horticulture and Forestry.

For facilities, see LABORATORIES AND EQUIPMENT.

INDUSTRIAL ARTS.

[See SHOPWORK.]

ITALIAN.

[See ROMANCE LANGUAGES.]

LATIN.

1. LIVY, HORACE, PLAUTUS—Recitations. Five times a week. M, Tu, W, Th, F. Sec. I at 8¼; Sec. II at 9¼.

FIRST TERM.—Cicero De Senectute and De Amicitia. Review of selected topics in Latin Grammar. Re-translation.

SECOND TERM.—Livy: Book XXI, or Book XXII. Roman History.

THIRD TERM.—Horace: Odes and Epodes. Prosody, Sight Reading.

Professor DERBY.

Required in the Freshman year of the Course in Arts and Latin Course in Philosophy.

2. LATIN LITERATURE—Selections from representative writers. Recitations and Lectures. Five times a week. M, Tu, W, Th, F, at 1½.

FIRST TERM.—Tacitus Dialogue; Agicola; Juvenal.

SECOND TERM.—Cicero. Roman Literature.

THIRD TERM.—Horace's Satires and Epistles.

Professor DERBY.

Required in the Sophomore year of the Course in Arts and Latin Course in Philosophy.

[3. ROMAN PHILOSOPHY—Recitations, Essays and Lectures. Three times a week through the year. M, W, F, at 3½.

Lucretius: Selections. Cicero.] Omitted in 1895-96.

Professor DERBY.

Course 3 must be preceded by courses 1 and 2.

4. PHARMACEUTICAL LATIN—Recitations. M, Tu, W, Th, F, at 1½.

FIRST AND SECOND TERMS.—Robinson's Latin Grammar of Pharmacy and Medicine. Five times a week.

THIRD TERM.—Two hours a week. Tu, Th, at 1½.

Mr. DYE.

Required in the first year of the Course in Pharmacy. Required in the first year of the Course Preparatory to the Study of Medicine; in this Course the third term's work is five hours a week. M, Tu, W, Th, F, at 1½.

5. ANTIQUITIES, LATIN WRITING—Lectures and Recitations. Twice a week through the year. M, F, at 2½.

Professor DERBY.

Course 5 must be preceded by course 1.

6. ROMAN DRAMATIC POETRY—Lectures and Recitations. Three times a week through the year. Tu, Th, 3½ to 5.

Professor DERBY.

Course 6 must be preceded by courses 1 and 2.

MATHEMATICS.

1. ALGEBRA—Recitations. M, Tu, W, Th. F, at 10½.

FIRST TERM.—Five times a week. Venable's Easy Algebra.

Mr. ARNOLD.

Required in the first year of the Short Course in Agriculture.

2. ALGEBRA—Recitations. M, Tu, W, Th, F, at 10½.

THREE TERMS.—Five times a week. Wentworth's Elements of Algebra, completed.

Assistant Professor SPERR, Assistant Professor RAY.

Required of students in the first year of the Short Course in Mining and the Course in Clayworking and Ceramics, and is a special class and course for such students only.

3. GEOMETRY—Recitations. M, Tu, W, Th, F, at 10½.

SECOND TERM.—Plane Geometry. Five times a week. Venable's Geometry.

Mr. ARNOLD.

Required in the first year of the Short Course in Agriculture.

4. GEOMETRY AND TRIGONOMETRY—Recitations. Five times a week. M, Tu, W, Th, F, at 9½.

FIRST TERM.—Plane Geometry. Venable's Geometry.

SECOND TERM—Solid Geometry. Venable's Geometry.

THIRD TERM.—Plane Trigonometry. Lock's Elementary Trigonometry.

Mr. ARNOLD.

Required in the first year of the Short Course in Mining, and the Course in Clayworking and Ceramics.

5. TRIGONOMETRY, HIGHER ALGEBRA, ANALYTICAL GEOMETRY—Lectures and Recitations. Three times a week.

FIRST TERM.—Analytical and Spherical Trigonometry. Lock's Elementary Trigonometry, completed; Lock's Higher Trigonometry, with notes on Spherical Trigonometry. M, W, F, at 9½.

SECOND TERM.—Higher Algebra and Theory of Equations. Taylor's College Algebra, chapters 12 to 31. M, W, F, at 9½or 10½.

THIRD TERM.—Analytical Geometry. Nichol's Analytical Geometry. M, W, F, at 10½.

Professor BOHANNAN.

Required in the Freshman year of the Course in Science; optional in the Freshman year of the Courses in Arts and Philosophy.

6. TRIGONOMETRY, HIGHER ALGEBRA, ANALYTICAL GEOMETRY—Lectures and Recitations. Five times a week through the year. M, Tu, W, Th, F. Sec. I and II at 9½; Sec. III at 10½; Sec. IV at 1½; Secs. V and VI at 2½.

FIRST TERM.—Trigonometry. Lock's Elementary Trigonometry; Lock's Higher Trigonometry.

SECOND TERM.—Higher Algebra and Theory of Equations (Taylor's College Algebra), three times a week; Analytical and Spherical Trigonometry, twice a week (Lock's Higher Trigonometry, with notes on Spherical Trigonometry).

THIRD TERM.—Analytical Geometry. Nichol's Analytical Geometry.

Prof. BOHANNAN, Ass't Prof. MCCOARD, Ass't Prof. Lord, Mr. ARNOLD, Mr. SWARTZEL.

Required in the Freshman year of the Courses in Engineering.

7. ANALYTICAL GEOMETRY AND CALCULUS—Lectures and Recitations. Five times a week through the year. M, Tu, W, Th, F. Secs. I, II and III at 8½.

FIRST TERM.—Analytical Geometry continued (Nichol's Analytical Geometry); Calculus begun (Greenhill's Calculus).

SECOND AND THIRD TERMS.—Calculus continued.

Professor BOHANNAN, Assistant Professor MCCOARD, Mr. ARNOLD.

Required in the Sophomore year of the Engineering Course.

8. LEAST SQUARES—Lectures and Recitations. Tu, Th, at 11½ or 10½.

FIRST TERM.—Twice a week. Johnson's Theory of Errors and Least Squares.

Professor BOHANNAN.

Required in the Junior year of the Courses in Civil, Mechanical and Electrical Engineering.

9. ADVANCED MATHEMATICS—Lectures and Recitations. Five times a week through the year. Topics will be changed from year to year to meet the wishes of the students. Selections may be made from the following courses: (a) Advanced Calculus (Houel); (b) Differential Equations (Johnson, Forsythe, Craig); (c) Higher Plane Curves (Salmon); (d) Advanced Analytical Geometry (Casey, Salmon); (e) Analytical Geometry of three dimensions (Chas. Smith, Frost, Salmon); (f) Theory of Equations (Burnside and Panton); (g) Modern Higher Algebra (Salmon, Serret, Cole's Netto); (h) Modern Geometry (Cremona, Reye, Steiner, Van Staudt, Chasles); (i) Determinants (Muir); (j) Elliptic Functions (Weber, Halphen, Durege, Hermite, Greenhill, Briot and Bouquet); (k) General Theory of Functions (Forsyth, Harkness and Morley, Tannery, Weierstrass, Durege, Thomae, Biermann); (l) Potential-Function (Clausius, Reimann, Dirichlet, Peirce); (m) Mathematical Theory of Electricity (Mascart and Joubert); (n) Higher Geodesy (Clarke, Helmert, Jordan); (o) Spherical Harmonics (Byerly, Ferrers, Heine); (p) Mathematical Optics.

Professor BOHANNAN, Assistant Professor LORD.

10. ADVANCED MATHEMATICS—Lectures and Recitations five times a week through the year. A continuation of Course 9.

Professor BOHANNAN.

11. DIFFERENTIAL EQUATIONS—Lectures. M, at 11½.

FIRST TERM.—Once a week. The special differential equations occurring in mechanical problems. Osborne's Examples.

Professor BOHANNAN.

Required in the Junior year of the Course in Mechanical Engineering.

12. THE ELEMENTS OF MODERN GEOMETRY—Lectures. Tu, Th, at 10½.

SECOND TERM.—Twice a week.

Professor BOHANNAN.

Optional in Arts and Philosophy Courses.

MECHANICAL ENGINEERING.

2. TESTING LABORATORY—M, Tu, W, Th, F, 9½ to 12½.

(*a*) THREE TERMS.—From two to four times a week.

A course in exact metal work, including grinding an l measuring as in producing accurate standard plugs and rings; oil testing, comprising determination of friction, endurance, density, drying quality and flashing point; calibration of steam engine indicator springs, steam gauges; indicator practice; testing materials of construction in tension, compression, flexure and impact; experiments in flow of fluids.

Required in the Junior year of the Course in Mechanical Engineering and portions of it in the Course in Electrical Engineering.

(*b*) THREE TERMS.—From three to five times a week. M, Tu, W, Th, F, 8¼ to 11½.

An advanced course in experimental engineering, comprising calibration and use of transmission dynamometers; belt testing; use of condensing, throttling and barrel calorimeters for steam; testing of eliminators, injectors and steam pipe coverings; the steam engine indicator and prony brake as applied to steam engines; valve and eccentric setting; efficiency tests of steam engines when used, condensing, non-condensing and compound; efficiency of boilers; testing of complete steam plants; flow of water through weirs, orifices and pipes; efficiency tests of hot air engines, pulsometer, steam pumps, hydraulic ram, centrifugal pump, impulse, and turbine water wheels.

*Professor ROBINSON, Mr. HITCHCOCK.

Required in the Senior year of the Courses in Civil and Mechanical Engineering.

3. MECHANISM.

FIRST TERM.—Twice a week. Tu, Th, at 11½ or 1½.

SECOND TERM.—Five times a week. Lectures on the Principles of Elementary Combinations of Mechanism. M, Tu, W, Th, F, at 11½ or 1½.

THIRD TERM.—Four times a week. Accurate laying out of a movement, designing and constructing of same in material. Laboratory open M, Tu, W, Th, F, 8¼ to 11½.

*Professor ROBINSON, Mr. HITCHCOCK.

Required in the Junior year of the Course in Mechanical Engineering; the first and second terms required in the Course in Electrical Engineering.

4. INVENTION AND DESIGNING.—M, W, F, at 1½ or 2½.

FIRST TERM.—Three times a week. Lectures on Machine Designs and Original Designing of Machine Parts, and on Invention of Machines, and a course of five or more original inventions, and parts fully designed and drawn ready for construction.

*Professor ROBINSON, Mr. HITCHCOCK.

Required in the Senior year of the Course in Mechanical Engineering.

5. ENGINE DESIGNING.—M, Tu, W, Th, F, at 2½.

THIRD TERM.—Five times a week. A course of Invention, Designing, Detailing and Drawing, as in office work practice. A subject is chosen which involves the necessity of calculations as based on most of the principles previously taught in the course.

*Professor ROBINSON, Mr. HITCHCOCK.

Required in the Senior year of the Course in Mechanical Engineering.

6. ANALYTICAL MECHANICS—M, Tu, W, Th, F. Sec. I at 8¼; Sec. II at 10¼.

FIRST AND SECOND TERMS.—Five times a week. Lectures accompanied by Bowser's Mechanics, including statics and kinetics.

*Professor ROBINSON, Assistant Professor LORD.

Required in the Junior year of the Courses in Engineering.

7. STRENGTH OF MATERIALS—M, Tu, W, Th, F. Sec. I, at 8¼; Sec. II at 10¼.

THIRD TERM.—Five times a week. 1. Lectures and text-book on elastic resistance to tension, compression, flexure, torsion. 2. Lectures and text-book on ultimate resistance to rupture by tension, compression, flexure, torsion. 3. Lectures on allowed maximum-stress in structures, and the various modes of determining it, including factor of safety, absolute modulus of safety, rational limit of safety, and Wohler's Laws. 4. Two weeks of the term. Lectures on hydraulics; on flow of water through orifices, weirs, pipes, streams, and the gauging of streams. Adaptation of formulas to flow of gases at constant density.

*Professor ROBINSON, Assistant Professor LORD.

Required in the Junior year of the Courses in Engineering.

8. THERMODYNAMICS—M, Tu, W, Th, F, at 11½.

FIRST TERM.—Five times a week. Lectures on the action of heat. General equations, isothermal, adiabatic, and isodiabatic lines. Indicator diagrams of perfect engines, Rankine and Wood's Thermodynamics serves as accompaniment. Flow of gases through pipes and orifices under various laws of varying density.

*Professor ROBINSON, Professor WILLISTON.

Required in the Senior year of the Mechanical Engineering and Electrical Engineering Courses.

9. PRIME MOVERS—M, Tu, W, Th, F, at 11½.

SECOND TERM.—Five times a week.

1st. Lecture on heat engines, including hot air, steam and gas engines.

2d. Water motors, including impulse wheels, turbines, breast and overshot wheels, water engines, wind wheels. Rankine's Prime Movers and Wood's Thermodynamics in accompaniment.

3d. Lectures on valve gears, shaft and fly ball, governors, fly wheels, and fluctuation of speed, counterbalancing, quiet running and economy of engines.

*Professor ROBINSON, Professor WILLISTON.

Required in the Mechanical and Electrical Engineering Courses.

10. MACHINERY AND MILLWORK—M, Tu, W, Th, F, at 11½.

THIRD TERM.—Five times a week. Lectures on efficiency of elementary combinations of machinery, strength, endurance, friction, shock, adaptation of materials, fly-wheels for machines, transmission of power and machinery for the same. Rankine's Machinery and Millwork in accompaniment.

*Professor ROBINSON, Professor WILLISTON.

Required in the Mechanical and Electrical Engineering Courses.

11. TECHNICAL DRAWING—Machine Designing and Drawing. Lectures and Practice. M, W, F, 9¼ to 11¼. Th, 1½ to 4½.

THIRD TERM.—Five times a week (ten hours' practice). Lectures on machine

*During Professor Robinson's absence on leave, the courses in Mechanical Engineering are in charge of Professor Williston, Assistant Professor Lord and Mr. Hitchcock.

designing. Practice. Designing machine parts, and drawing and blueprinting them ready for construction, showing form and dimensions.

Professor WILLISTON.

Required in the Junior year of the Courses in Mechanical and Electrical Engineering.

For facilities, see LABORATORIES AND EQUIPMENT.

METALLURGY.

1. MINERALOGY.—LECTURES. M, W, F, at 9¼.

SECOND TERM.—Three times a week. With references to Dana's Manual of Mineralogy and Lithology as a text-book. Students required to keep notes, and to study specimens in the collection of minerals. A short introductory course is given on crystallography, illustrated by wooden models.

Professor LORD.

Required in the Freshman year of the Course in Science, and in the first year of the Course in Pharmacy; optional in the Freshman year of the Courses in Arts and Philosophy.

2. MINERALOGY—Lectures. M, W, F, at 9¼.

THIRD TERM.—Three times a week. Similar to course 1, above, but more practical, and arranged so as to be preparatory to determinative mineralogy (course 3).

Professor LORD.

Required in the Freshman year of the Courses in Civil and Mining Engineering.

3. DETERMINATIVE MINERALOGY.

THIRD TERM.—Three times a week. Laboratory course in practical determination of minerals by physical and chemical tests. Brush's Determinative Mineralogy is used as a manual. Each student is furnished with a set of apparatus, and works under the instructor's inspection. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

Professor LORD.

Required in the Junior year of the Course in Mining Engineering.

4. METALLURGY—Lectures. M, Tu, W, Th, F, at 1½.

FIRST AND SECOND TERMS.—Five times a week. A course of lectures upon fuel and its uses, iron and steel, copper, lead, gold and silver, their properties, tests, ores and details of the modes of reduction. Students are required to take notes and also to study references to standard works and journals.

Professor LORD.

Required in the Junior year of the Course in Mining Engineering, and in the Senior year of the Course in Mechanical Engineering.

5. METALLURGICAL LABORATORY—Lectures and Laboratory Work.

THREE TERMS.—Laboratory practice in the analysis of iron and steel, iron ores, fuels, clays, etc., by the most approved methods as practiced in the technical laboratories of metallurgical works. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

Professor LORD.

Required in the Sophomore year of the Course in Mining Engineering, and the third term of the first year of the Course in Clayworking and Ceramics.

Course 5 must be preceded by Agricultural Chemistry, courses 1 and 3, or by General Chemistry, course 3.

6. ASSAYING—Laboratory Work.

SECOND TERM.—Work in the assaying of gold, silver and lead ores by furnace methods. Oral instruction, with reference to standard books on assaying. Laboratory open M, Tu, W, Th, F, 8½ to 4½.

Professor LORD.

Required in the Junior year of the Course in Mining Engineering.

7. METALLURGICAL CONSTRUCTION—M, W, F, at 2½.

FIRST TERM.—Three hours a week. Practice in the designing of furnaces and other metallurgical machinery, including detail drawings and estimates.

Professor LORD, *Assistant Professor RAY.

Required in the Senior year of the Course in Mining Engineering.

8. ORE DRESSING—Lectures. M, Tu, W, Th, F, at 1½.

THIRD TERM.—Five times a week. Instruction in the methods of concentrating and enriching ores by mechanical means. Lectures with reference to Rittinger's Auf Bereitung, Callon's Cours d' Exploitation des Mines, Kunhardt's Ore Dressing, and various papers in technical journals.

Professor LORD.

Required in the Senior year of the Course in Mining Engineering.

9. MINERAL CHEMISTRY—Lectures and Laboratory Practice.

FIRST TERM.—Five hours a week. M, Tu, W, Th, F, at 9½. A brief course in elementary chemistry taught partly by lectures and partly by laboratory practice of a simple character.

SECOND TERM.—Two hours a week. Tu, Th, at 9½.

THIRD TERM.—Five hours a week. M, Tu, W, Th, F, at 8½. The second and third terms are devoted to lectures upon fire-damp, mine explosions, explosives, boiler waters, poisonous gases, iron ores, iron and steel, their properties and modes of manufacture, coal and coke, etc.

Professor LORD.

Required in the second year of the Short Course in Mining, and in the first term of the first year of the Course in Clayworking and Ceramics.

10. PLANS AND SPECIFICATIONS—M, Tu, W, Th, F, at 10½ or 11½.

THIRD TERM.—Five hours a week. Each student is required to make plans, drawings and estimates for some special metallurgical or mining plant assigned him by the Professor in charge. He also makes a report upon the process involved, and an estimate of the probable cost of products, etc.

Professor LORD, *Assistant Professor RAY.

Required in the Senior year of the Course in Mining Engineering.
For facilities, see LABORATORIES AND EQUIPMENT.

MINE ENGINEERING.

1. MINE SURVEYING—Lectures and Field Practice. M, Tu, W, Th, F, at 1½.

FIRST TERM.—Five hours a week. This is similar to course 4, but more

*After October 15, 1894.

elementary. The same book is used. The students have more practice in the drawing room.

*Assistant Professor SPERR, Assistant Professor RAY.

Required in the second year of the Short Course in Mining.

2. VENTILATION AND HAULAGE—M, Tu, W, Th, F, at 1½.

SECOND TERM.—Five hours a week. Lectures are of an elementary character, illustrated by experiments and maps of mines and models when possible, tests by safety lamps and anemometers, and solution of problems of air distribution in coal mines.

*Assistant Professor SPERR, Assistant Professor RAY.

Required in the second year of the Short Course in Mining.

3. MINE OPERATING—M, Tu, W, Th, F, at 1½.

THIRD TERM.—Five hours a week. A course of lectures and practical instruction in mine book-keeping and accounts, cost of working, etc., particularly adapted to Ohio coal mining.

*Assistant Professor SPERR, Assistant Professor RAY.

Required in the second year of the Short Course in Mining.

4. MINE SURVEYING—M, Tu, W, Th, F, at 2½.

FIRST TERM.—Five hours a week. Field practice in the use of instruments for surface and underground surveys. Full notes are taken, and maps and plans made in the drawing-room. Davie's Surveying, by Van Amringe, is used as a text-book.

*Assistant Professor SPERR, Assistant Professor RAY.

Required in the Junior year of the Course in Mining Engineering.

5. MINING ENGINEERING—Lectures. M, Tu, W, Th, F, at 8½.

THREE TERMS.—Five hours a week. Mine operating, mining machinery, ventilation, shaft-sinking, working out deposits, etc. Constant reference is required to the standard works and to the leading technical journals, with practice in designing mine plants, draughting, and estimates.

*Assistant Professor SPERR, Assistant Professor RAY.

Required in the Senior year of the Course in Mining Engineering.

MILITARY SCIENCE AND TACTICS.

1. MILITARY DRILL—Five times a week through the year. M, Tu, W, Th, F, 11½ to 12⅔.

Required of all male students, not specially excused, during the Freshman, Sophomore and Preparatory years.

Lieutenant WILSON, U. S. A.

2. TACTICS—Lectures and Recitations. Twice a week during the second term, 11½ to 12⅔; Secs. I, II, M, Th; Secs. III, IV, Tu, F.

Lieutenant WILSON, U. S. A.

Required of all Freshmen and non-commissioned officers.

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*Assistant Professor Sperr resigned October 15, 1894, when Assistant Professor Ray assumed duties.

3. ART OF WAR—Lectures and Recitations. Twice a week during the second term, 11½ to 12⅓. Sec. I, M, Th; Sec. II, Tu, F.

Lieutenant WILSON, U. S. A.

Required of all Sophomores, excepting commissioned officers. For description of the work of the Department, see page 31.

PATHOLOGY.

[See VETERINARY MEDICINE.]

PHARMACY.

1. PHARMACY—Lectures. M, W, F, at 9¼.

FIRST TERM.—Lectures three times a week. Remington's Practice of Pharmacy. General pharmaceutical processes..

Professor KAUFFMAN.

Required in the second year of Courses in Pharmacy and Veterinary Medicine, and in the third year of the Course Preparatory to the Study of Medicine.

1*a*. PHARMACY—Lectures and Laboratory Work.

SECOND AND THIRD TERMS.—Lectures twice a week. Laboratory five times a week.

Required in the third year of the Course Preparatory to the Study of Medicine.

Professor KAUFFMAN, Mr. DYE.

2. PHARMACY—Lectures and Laboratory Work.

SECOND TERM.—Lectures twice a week, Tu, Th, at 9¼. Laboratory practice daily. Laboratory open M, Tu, W, Th, F, 8¼ to 4½. United States Pharmacopeia official preparations.

THIRD TERM.—Lectures twice a week, Tu, Th, at 9¼. Laboratory practice daily, the dispensatories, official preparations. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

Professor KAUFFMAN.

Required in the second year of the Course in Pharmacy.

3. PHARMACY—Lectures and Laboratory Work.

FIRST TERM.—Lectures twice a week, Tu, Th, at 10¼. Laboratory practice daily. Pharmaceutical chemistry. Remington's Practice of Pharmacy. Unofficial preparations. The National Formulary.

SECOND TERM.—Lectures once a week, Th, at 10¼. Laboratory practice three times a week. Laboratory open M, T, W, Th, F, 8¼ to 4½. Extemporaneous pharmacy, prescription practice.

THIRD TERM.—Lectures twice a week, Tu, Th, at 10¼. Dispensing practice daily. Prescription practice daily. M, Tu, W, Th, F, 8¼ to 4½.

Professor KAUFFMAN, Mr DYE.

Required in the third year of the Course in Pharmacy.

4. PHARMACY—Prescription writing. Lectures twice a week. Tu, Th, at 10½.

Professor KAUFFMAN.

Required in the second term of the second year of the Course in Veterinary Medicine.

5. PHARMACY—Lectures and Recitations. M, W, F, at 3½.

FIRST TERM.—Materia Medica three times a week. Official drugs and classification.

SECOND TERM.—Materia Medica three times a week. Official and unofficial drugs.

THIRD TERM.—Materia Medica and Theraputics three times a week. Synthetic Products. Poisons and Antidotes.

Mr. DYE.

For facilities, see LABORATORIES AND EQUIPMENT.

PHILOLOGY.

[See ENGLISH AND RHETORIC.]

PHILOSOPHY.

1. PSYCHOLOGY—Recitations, Discussions and Lectures. Three times a week, M, W, F, at 11½.

FIRST TERM.—The Senses and the Intellect. Murray's Handbook of Psychology.

SECOND TERM.—The Feelings and the Will. Murray's Handbook of Psychology.

Mr. KNOWLTON.

Required in the Junior year of the Courses in Arts, Philosophy and Science.

2. ETHICS—Recitations, Discussions and Lectures. Three times a week, M, W, F, at 11½.

THIRD TERM.—

Mr. KNOWLTON.

Required in the Junior year of the Courses in Arts, Philosophy and Science.

3. LOGIC—Recitations, Discussions and Praxis. Three times a week, M, W, F, at 3½.

FIRST TERM.—The elements of logic, deductive and inductive. Jevons's Elements of Logic.

SECOND TERM—Introduction to the study of philosophy. Stuckenberg's History of Philosophy begun.

Mr. KNOWLTON.

Required in the Senior year of the Courses in Arts and Philosophy.

4. HISTORY OF PHILOSOPHY.—Recitations, Discussions and Lectures. Three times a week, M, W, F, at 3½.

THIRD TERM.—Lectures on ancient philosophy and recitations in modern philosophy. Windelband's History of Philosophy.

Mr. KNOWLTON.

Required in the Senior year of the Courses in Arts and Philosophy.

5. RECENT PHILOSOPHY—Reading and Discussion. Twice a week through the year. Hours to be arranged.

Reading and discussion of leading books and authors. Especial attention is given to the relations of philosophy to science, and the doctrine of evolution. A theme is required once a term from each student.

President SCOTT.

6. MASTERPIECES—Representative works of ancient and modern philosophers critically studied. Essays and discussions. Three times a week through the year. Hours to be arranged.

President SCOTT.

7. LOGIC—Recitations and Discussions. Twice a week. Tu, Th, at 9½.

FIRST TERM.—Jevons's Lessons in Logic.

President SCOTT.

Required in the Freshman year of the English Course in Philosophy.

8. PSYCHOLOGY—An Elementary Course. Recitations and Discussions. Twice a week, Tu, Th, at 9½.

SECOND AND THIRD TERMS.—Dewey's Psychology, with readings and discussions.

President SCOTT.

Required in the Freshman year of the English Course in Philosophy, and in the second year of the Course Preparatory to the Study of Medicine.

9. ETHICS—An Elementary Course. Recitations and Discussions. Three times a week, first term, Tu, Th, at 11½, F, at 1½.

Mr. KNOWLTON.

Required in the Sophomore year of the English Course in Philosophy.

10. HISTORY OF PHILOSOPHY—Hours to be arranged.

SECOND AND THIRD TERMS.—Falkenberg's History of Modern Philosophy.

Mr. KNOWLTON.

Required in the Sophomore year of the English Course in Philosophy.

11 and 12. ADVANCED WORK—The particular subjects will be determined from year to year. Those students who elect Philosophy as their major study will be required to devote to these courses at least five hours a week through the Junior and Senior years. Other Juniors and Seniors who elect Philosophy will give two hours a week to similar but more restricted courses. Courses 11 and 12 will be given in alternate years. Hours to be arranged.

President SCOTT.

PHYSICS AND ELECTRICAL ENGINEER.

I. PHYSICS.

1. ELEMENTARY PHYSICS - Recitations and Lectures. M, Tu, W. Th, F, at 8¼.

FIRST TERM— } Five hours a week. An experimental treatment of the
SECOND TERM— } elements of physics. Carhart and Chute supplemented by lectures. MR. BOYD.

Required in the first year of the Course in Pharmacy, Short Course in Agriculture, Short Course in Mining, and the Course in Clayworking and Ceramics.

2. PHYSICS—Lectures and Recitations. M, W, F, at 9¼.

FIRST TERM.—Three times a week. Mechanics and heat.

SECOND TERM.—Three times a week. Electricity and magnetism.

THIRD TERM.—Three times a week. Sound and light.

Professor THOMAS.

Required in the Sophomore year of the Courses in Science, Civil Engineering, Mechanical Engineering and Electrical Engineering, in the Junior year of the Course in Mining Engineering, and in the first year of the Course Preparatory to the Study of Medicine.

3. PHYSICS.—Tu, Th, at 9¼.

THREE TERMS.—Twice a week. Extension of course 2, with practice in solution of problems.

Professor THOMAS, Mr. BROWN.

Required in the Sophomore year of the Course in Electrical Engineering.

4. ELECTRICITY AND MAGNETISM—Lectures and Recitations. M, W, F, at 11½.

FIRST TERM.—Three times a week. Mascart and Joubert's Electricity and Magnetism. Fleming's Alternate Current Transformer. Ewing's Magnetism.

Professor THOMAS.

Required in the Junior year of the Course in Electrical Engineering.

5. PHYSICAL LABORATORY.

SECOND TERM.—Elementary manipulation. Length, mass and time measurement. Work in density, elasticity, etc. Work in heat begun. M, Tu, W, 1½ to 4½, credit five hours.

THIRD TERM.—Heat continued. Electricity and Magnetism. Text: Stewart and Gee's Practical Physics. Books of reference: Pickering, Kohlrausch, Glazebrook and Shaw, Ayrton and others. M, Tu, W, 1½ to 4½, credit five hours.

Professor THOMAS, Mr. BOYD, Mr. BROWN.

Required in the Sophomore year of the Course in Electrical Engineering.

6. PHYSICAL LABORATORY—Lectures and Laboratory Work.

FIRST TERM.—Sec. I, M, F; Sec. II, W, Th, 1½ to 4½, credit four hours.

SECOND TERM— } Theory and practice of magnetic and electrical measure-
THIRD TERM— } ment, including the testing and standardizing of instru-

ments; conductivity of conductors; insulation resistance, and capacity of insulated conductors and cables; temperature co-efficients; commercial measureing and testing instruments, etc. Strength and distribution of magnetic fields, magnetic moments, permeability, etc. Work in light, including optical constants; spectroscopy; photometry of gas, electric, and other lights, etc. M, Tu, W, 1½ to 4½, credit five hours.

Professor THOMAS.

Required in the Junior year of the Course in Electrical Engineering.

7. PHYSICAL LABORATORY.

THREE TERMS.—M, Tu, W, 1½ to 4½, credit two to five hours.
Professor THOMAS, MR. BOYD, MR. BROWN.

Required in Civil and Mechanical Engineering Courses.

Course 7 must be preceded by course 2.

8. PHYSICAL LABORATORY.

THREE TERMS.—Two days per week, M, Tu, W, 1½ to 4½, credit two hours.
Professor THOMAS, MR. BOYD, MR. BROWN.

Course 8 must be preceded or accompanied by course 2. Required in the second term, first year, of the Course Preparatory to the Study of Medicine.

9. PHYSICAL LABORATORY.

THREE TERMS.—A second year's work in physical laboratory. W, Th, F, 1½ to 4½, credit five hours. Professor THOMAS.

Course 9 must be preceded by course 7.

The work in the Physical Laboratory begins with exercises in length, mass and time measurements, making use of scales, tapes and bars, micrometer screws, micrometer microscopes, the dividing engine, the cathetometer, the balance, chronometers, chronoscopes, etc. This course is intended to give the student facility in the use of instruments, and knowledge of the theory of their construction and adjustment. The determination of various physical constants follows, with elementary exercises in heat, light, electricity and magnetism, after which the student takes up such advanced work as his taste and skill permit. The experimental work is accompanied by instruction in methods and in the discussion of results.

II. ELECTRICAL ENGINEERING.

2. ELECTRICAL ENGINEERING—Lectures.

THREE TERMS.—First and second terms five times a week, M, Tu, W, Th, F, at 10½ or 11½; third term three times a week, M, W, F, at 10½ or 11½. Theory of dynamo-electric machinery, including direct current and alternating current generators and motors; methods of regulation and control; circuits, lamps and auxiliary apparatus; storage batteries; applications of electricity to street car and mine working; design, construction and management of plant, central and isolated; specifications and contracts; law of contracts; rights and liabilities of electric companies, etc.

Professor THOMAS, Assistant Professor CALDWELL.

Required in the Senior year of the Course in Electrical Engineering.

3. DESIGNING AND DRAWING.

THREE TERMS.—First and second terms three times a week, M, W, F, 8¼ to 10¼; third term five times a week, M, Tu, W, Th, F, 8¼ to 10¼. Working drawings of electrical apparatus designed by the student; station, circuit, machine and other technical drawing. Blue-printing, etc.

Assistant Professor CALDWELL.

Required in the Senior year of the Course in Electrical Engineering.

4. ELECTRICAL LABORATORY.

THREE TERMS.—Three half days per week. Laboratory open M, Tu, W, Th, F, 1½ to 4½, and S, 9 to 12. A full experimental course in the handling and testing of steam and gas engines, dynamos, motors, storage batteries, circuits, instruments, etc. Special courses are given, suited to the preparation and object of the student.

Professor THOMAS, Assistant Professor CALDWELL.

Required in the Senior year of the Course in Electrical Engineering.

5. ELECTRICAL ENGINEERING.

THREE TERMS.—Twice a week. A special course, with work in Physical and Electrical Laboratories. Assistant Professor CALDWELL.

Required in the Senior year of the Course in Mining Engineering.

For facilities, see LABORATORY AND EQUIPMENT.

PHYSIOLOGY.

1. HUMAN ANATOMY AND PHYSIOLOGY—Lectures, Recitations, and Laboratory Work.

THREE TERMS.—Lectures, Recitations, and Demonstrations, M, W, F, at 10¼. Text book: Martin's Human Body; or Foster.

Professor BLEILE.

Required in the Sophomore year of the Courses in Science, Agriculture, and Horticulture and Forestry, in the first year of the Course in Veterinary Medicine, and in the second year of the Course in Pharmacy, and in the second year of the Course Preparatory to the Study of Medicine.

2. HUMAN ANATOMY AND PHYSIOLOGY—Lectures, Recitations, and Demonstrations.

THIRD TERM.—Three times a week. M, W, F, at 9¼. Martin's Briefer Course. Professor BLEILE.

Required in the first year of the Short Course in Agriculture.

3. PHYSIOLOGICAL LABORATORY—Credit three or five Hours. Hours to be arranged.

FIRST TERM.—The use of Apparatus, and Methods of Demonstration.

SECOND TERM.—Vertebrate Dissection and Methods of Bacteriological Study.

THIRD TERM.—Physiological Chemistry.

Professor BLEILE, Mr. MORREY.

Required in the third year of the Course Preparatory to the Study of Medicine.

3*a*. PHYSIOLOGICAL LABORATORY—Credit three or five hours. Hours to be arranged.

THREE TERMS.—For advanced students only.

Professor BLEILE, Mr. MORREY.

4. HISTOLOGY.—Laboratory. T, W, T, 1½ to 4½. Five hours credit.

FIRST TERM.—Students become familiar with the use of the microscope and its accessories, with test objects, drawings, measuring, preparing reagents staining and mounting sections, and with the histology of simple tissues.

SECOND TERM— } The study of tissues is continued, with practice in harden-
THIRD TERM— } ing and imbedding, and sectioning.

Text-book recommended: Shæfer's Essentials of Histology, or Klein's Elements with the manuals of Rauvier, Sterling, and others at hand for reference.

Professor BLEILE, Mr. MORREY.

Required in the Course in Veterinary Medicine.

5. MICROSCOPY.—Laboratory. Tu, Th, at 8½.

THIRD TERM.—Two hours a week. Application of the Microscope to Pharmacognosy.

Professor BLEILE, Mr. MORREY.

Required in the second year in the Course in Pharmacy.

6. BACTERIA IN THEIR RELATION TO MILK, BUTTER AND CHEESE.

SECOND TERM.—Lectures twice a week during six weeks.

Professor BLEILE.

Required in the Course in Dairying.
For facilities, see LABORATORIES and EQUIPMENT.

POLITICAL SCIENCE.

1. POLITICAL ECONOMY—Recitations, Lectures and Individual Investigations. Twice a week. Sec. I, M, W, at 9½; Sec. II, Tu, Th, at 11½.

FIRST AND SECOND TERMS.—The Elements and Principles of Political Economy. Walker's Political Economy.

THIRD TERM.—Discussion of practical problems of industrial society.

Professor KNIGHT.

Required in the Junior year of the Courses in Arts, Latin Philosophy and Science; in the Senior year of the Modern Language Course in Philosophy; in the Sophomore year of the English Course in Philosophy; and in the second year of the Course Preparatory to the Study of Medicine.

2. ADVANCED ECONOMICS—Lectures, Recitations and Investigations. Twice a week, W., F., at 8½.

FIRST TERM.—Open Questions in Political Economy. Lectures embracing a discussion of immigration, railroad control, etc.

SECOND TERM.—Industrial and Social Reforms. Lectures on the labor problem, charities, etc.

THIRD TERM.—The History of Economic Thought. Text-book, Ingram's History of Political Economy.

Professor KNIGHT.

Course 2 must be preceded by course 1.

3. INTERNATIONAL LAW—Recitations and Lectures. Twice a week. Tu, Th, at 8¼.

FIRST TERM.—Principles of International Law. Gallaudet's International Law, and assigned readings.

SECOND TERM.—History of Treaties. Lectures on the leading treaties of modern times, and their bearing upon the development of International Law.

Professor KNIGHT.

4. MUNICIPAL GOVERNMENT—Lectures and Investigations. Twice a week, Tu, Th, at 8¼.

THIRD TERM.—Lectures on the development and status of modern municipalities, and a comparative study of recent American municipal charters.

Professor KNIGHT.

5. THE DEVELOPMENT OF INDUSTRIAL SOCIETY—Lectures and Readings M, W, F, at 10¼.

FIRST TERM.—Three times a week. History of the development of industrial society.

Professor KNIGHT.

Course 5 must be preceded by course 1.

6. SOCIALISM—Recitations, Assigned Readings, and Individual Investigations.

SECOND AND THIRD TERMS.—Three times a week, M, W, F, at 10¼. A critical study of the history and present status of socialism.

Professor KNIGHT.

Course 6 must be preceded by course 1.

RHETORIC.

[See ENGLISH and RHETORIC.]

ROMANCE LANGUAGES.

I. FRENCH.

1. ELEMENTARY FRENCH—Recitations. Five times a week. M, T, W, Th, F. Sec. I at 8¼; Sec. II at 10½; Sec. III at 1½.

FIRST TERM.—Grammar: Whitney's Practical (Part I) or Joynes' Minimum Written Exercises. Reader. Whitney's (Parts I and II) or Super's (from Part II).

SECOND TERM.—Grammar and Reader finished. Erckmann-Chatrian: Waterloo (Super), or Thiers: Expedition de Bonaparte en Egypte (Edgren).

THIRD TERM.—Halévy: L'Abbé Constantin (Logie), or Mérimée: Colomba; Sandeau: Mademoiselle de la Seiglière (Warren). Sight Reading.

Professor BOWEN, Mr. WATSON.

Required in the Freshman year of the Latin and Modern Language Courses in Philosophy and of the Course in Science; optional in the Freshman year of the English Course in Philosophy, in the Junior year of the Course in Agriculture, in the Sophomore year of the Course in Horticulture and Forestry; in the Freshman year of the Courses in Engineering; and in the second year of the Course Preparatory to the study of Medicine.

2. PROSE, LYRICS AND DRAMA—Recitations and Lectures, with prose composition and oral drill. Lectures on the literature of the seventeenth century in France; comparison of the classic and romantic drama. Three times a week; M, W. F, at 8¼.

FIRST TERM.—Twice a week. Bercy's French Reader for Advanced Classes. Once a week. Chardenal's French Exercises for Advanced Pupils, Part I.

SECOND TERM—Twice a week. Bowen's Introduction to Modern French Lyrics; Corneille: Horace or Cinna. Once a week. Chardenal's Exercises, Part I, finished.

THIRD TERM.—Three times a week. Victor Hugo: Hernani. Private reading: La Chute. Exercises in conversation.

Professor BOWEN.

Required in the Sophomore year of the Latin and Modern Language Courses in Philosophy, and of the English Course in Philosophy, for students who have taken course 1.

3. SCIENTIFIC READING—Recitations. Twice a week. Tu, Th, at 9¼.

FIRST TERM.—Luquiens's Popular Science.

SECOND TERM.—Same.

THIRD TERM.—Tissandier: Les Fossiles or La Houille.

Mr. WATSON.

Required in the Sophomore year of the Course in Science, and of the Courses in Civil, Mining and Mechanical Engineering, for students who have taken course 1. Optional voluntary in the Sophomore year of the Course in Electrical Engineering Optional in the third year of the Course Preparatory to the Study of Medicine.

4. ADVANCED COURSE—Recitations and Lectures. Prose Composition. Study of idioms. Conversational practice. Dictation. Lectures on the history of French comedy; history of the French language; principles underlying sign and sound change in French. Three times a week. M, W, F, at 9¼.

FIRST TERM.—Twice a week. Daudet: Contes. Gautier's Scenes of Travel. Private reading. Once a week. Chardenal's French Exercises, Part II.

SECOND TERM.—Three times a week. Molière: Le Misanthrope, L'Avare. Beaumarchais: Le Barbier de Séville. Private reading. Molière: Le Médecin malgré lui; Les Précieuses Ridicules.

THIRD TERM.—Chanson de Roland (Paris); Racine: Andromaque, Esther, Phèdre, or Paul Bourget (Extraits choisis, Van Daell); Composition;

Bercy's Short Selections for translating English into French. Each once a week.

Professor BOWEN.

Required in the Junior year of the Modern Language Course in Philosophy.

II. ITALIAN.

1. ITALIAN—Grammar and Reading. Recitations. Twice a week. Tu, Th, at 8½.

FIRST TERM.—Grandgent's Italian Grammar and Italian Composition. De Amicis: Alberto.

SECOND TERM.—Goldoni: Commedie Scelte.

THIRD TERM.—Dante: Inferno.

Professor BOWEN.

Course 1 in Italian must be preceded by course 1 in French.
This course is given biennially and will not be offered in 1895–96.

III. SPANISH.

1. SPANISH—Grammar and Reading. Recitations. Twice a week. Tu, Th, at 8½.

FIRST TERM.—Manning's Spanish Grammar and Knapp's Spanish Readings.

SECOND TERM.—Knapp's Readings. Calderon: La Vida es Sueño.

THIRD TERM.—Cervantes: Don Quijote.

Professor BOWEN.

Course 1 in Spanish must be preceded by course 1 in French.

SHOPWORK.

1. CARPENTERY AND PATTERN-MAKING—Exercises in the principles and practice of carpentery, wood-turning and pattern-making. First term, M, W, 1½ to 4½; second term, Sec. I, M, W, Sec. II, Tu, Th, 1½ to 4½; third term, Sec. I, M, W, Sec. II, Tu, Th, 8¼ to 11¼; Sec. III, M, W; Sec. IV, Tu, Th, 1½ to 4½.

Professor WILLISTON, Mr. WEICK.

Required in the Freshman year of the Course in Industrial Arts, three terms, three times a week (six hours' practice): required in the Freshman year of the Courses in Mechanical and Electrical Engineering, third term, three times a week (six hours' practice); required in the Sophomore year of the Course in Mining Engineering, first term, twice a week (four hours' practice); required in the Sophomore year of the Courses in Agriculture and Horticulture and in the first year of Short Course in Agriculture, second term, once a week (two hours' practice).

2. FORGING—Exercises in smithwork, including elementary operations of the blacksmith, such as drawing, upsetting, bending, and welding and the making and tempering of steel tools and springs. First term, M, Tu, W, Th, F, 1½ to 4½; second term, Sec. I, 9¼ to 11¼, Sec. II, 1½ to 4½, Tu, Th; third term M, W, F, 9¼ to 11¼.

Professor WILLISTON, Mr. COMBS.

Required in the Sophomore year in the Course in Industrial Arts, three terms, three times a week (six hours' practice); required in the Sophomore year of the Courses in Mechanical and Electrical Engineering, first term, three times a week (six hours' practice); required in the Sophomore year of the Course in Mining Engineering, second term, twice a week (four hours' practice); required in the second year of the Short Mining Course, third term, three times a week (six hours' practice); required in the Sophomore year of the Courses in Agriculture and Horticulture, and in the first year of the Short Course in Agriculture, second term, twice a week (four hours' practice).

3. FOUNDRY WORK—This course will not be given in 1895-96.

4. CHIPPING AND FILING—Exercises in vise-work including chipping of cast and wrought iron, filing and scraping of accurate surfaces. M, W, Th, F, 2½ to 4½.

Professor WILLISTON, Mr. KNIGHT.

Required in the Sophomore year of the Course in Mechanical Engineering, second term, three times a week (six hours' practice); required in the Sophomore year of the Course in Electrical Engineering, second term, twice a week (four hours' practice); required in the Sophomore year of the Course in Mining Engineering, third term, twice a week (four hours' practice).

5. ELEMENTARY MACHINERY WORK—Exercises in hand-turning in iron and brass on speed lathes, and in turning, boring, fitting and the chasing of threads on engine lathes. First Term.—W, Th, F, 1½ to 4½. Second Term.—M, T, W, Th, F, 9½ to 11½; Th, F, 1½ to 4½. Third Term.—Tu, Th, 9½ to 11½; M, W, Th, F, 1½ to 4½.

Professor WILLISTON, Mr. KNIGHT.

Required in the Sophomore year of the Course in Mechanical Engineering, third term, three times a week (six hours' practice); required in the Sophomore year of the Course in Electrical Engineering, third term, twice a week (four hours' practice).

6. ADVANCED MACHINERY WORK—A continuation of course 5 with exercises on the planer, shaper and milling machine, and the making, hardening, and grinding of standard plugs, taps, twist drills, etc. Hours to be arranged.

Professor WILLISTON, Mr. KNIGHT.

Required in the Junior year of the Course in Mechanical Engineering, first term, three times a week (six hours' practice); required in the Junior year of the Course in Electrical Engineering, second term, four times a week (eight hours' practice).

For facilities, see LABORATORIES and EQUIPMENT.

SPANISH.

[See ROMANCE LANGUAGES.]

VETERINARY MEDICINE.

1. VETERINARY ANATOMY—Lectures and Demonstrations.

FIRST TERM.—Three times a week. M, W, F, at 8½. Lectures illustrated on skeletons and anatomical preparations.

SECOND TERM.—Five times a week. M, Tu, W, Th, F, at 8½. Lectures illustrated in the dissecting room.

THIRD TERM.—Three times a week. M, W, F, at 1½. Lectures illustrated in the dissecting room and on anatomical preparations. Books of reference and recommended for study: Chauvau's Comparative Anatomy (translated by Fleming), Strangeways; McFadyean; Müller and Leisering, and others.

Dr. WHITE.

Required in the first year in the Course in Veterinary Medicine and in the second year of the Course in Agriculture.

2. ANATOMICAL LABORATORY.

SECOND TERM.—Three times a week. Dissecting exercises, making anatomical preparations, and lectures on Topographical and Surgical Anatomy.

Books: McFadyean, Schmaltz, and others.

Dr. FISCHER.

Required in the third year of the Course in Veterinary Medicine.

3. GENERAL AND SPECIAL PATHOLOGY AND THERAPEUTICS. Lectures.

FIRST TERM.—General Pathology three times a week. M, W, F, at 1½.

SECOND TERM.—Special Pathology and Therapeutics of Infectious and Contagious Diseases. Three times a week. M, W, F, at 9½.

THIRD TERM.—Special Pathology and Therapeutics of Infectious and Contagious Diseases. Three times a week. M, W, F, at 1½.

Professor DETMERS.

Required in the second year of the Course in Veterinary Medicine, in the Junior year of the Course in Agriculture and in the second year of the Short Course in Agriculture.

3*a*. FIRST TERM.—Special Pathology and Therapeutics of Sporadic Diseases. Three times a week.

SECOND TERM.—Special Pathology and Therapeutics of Sporadic Diseases.

Books recommended: Robertson, Williams, Gresswell, Roll, Dieckerhoff, Friedberger and Frohner, and others.

Professor DETMERS.

Required in the third year of the Course in Veterinary Medicine. During six weeks of the second term the lectures treat of the common diseases of the dairy cow and students in the Course in Dairying are required to attend.

4. SURGICAL DISEASES AND OPERATIONS—Lectures. M, Tu, W, Th, F.

FIRST AND SECOND TERMS.—Five times a week. Lectures illustrated on skeletons, by drawings, on living animals in the clinic, and on the carcass

in the dissecting room. First term at 8½; second term at 1½.
Books recommended: Williams, Müller, Bayer, and others.

Dr. FISCHER.

Required in the second year of the Course in Veterinary Medicine.

5. OBSTETRICS—Lectures and Demonstrations.

THIRD TERM.—Five times a week. M, Tu, W, Th, F, at 8½.
Books: Fleming, Lessegwitz and others. Professor DETMERS.

Required in the second year of the Course in Veterinary Medicine.

6. PRINCIPLES OF HORSE-SHOEING—Lectures and Demonstrations.

THIRD TERM.—Three times a week. M, W, F, at 2½.
Lectures illustrated by numerous drawings, skeletons and preparations, and in the clinic. Dr. WHITE.

Required in the second year of the course in Veterinary Medicine.

7. BACTERIOLOGY—Lectures and laboratory work in the bacteriological laboratory and with the microscope.

FIRST AND THIRD TERMS.—Three times a week. Hours arranged.
Books: Fraenkel, Hueppe, Guenther and others. Dr. FISCHER.

Required in the third year of the Course in Veterinary Medicine. Arts, Philosophy and Science students electing this Course must have had Histology.

8. CLINIC IN THE VETERINARY HOSPITAL—Stationary and ambulatory.

The latter from 10:15 to 11:15 (Central time), every week day.
Professor DETMERS, Dr. FISCHER, Dr. WHITE.

Attendance optional during the first year, but required during the second year, while the senior or third year students are required to attend to the treatment of the animals presented, and to perform the necessary operations under the superintendence of the professor or his assistant.

9. PHARMACOLOGY—Lectures. Hours to be arranged.

FIRST AND SECOND TERMS.—Three times a week.
Books recommended: Finlay Dun, and Frohner. Dr. WHITE.

Required in the second year of the Course in Veterinary Medicine and in the third year of the Course in Pharmacy.

10. GENERAL THERAPEUTICS—Lectures. Hours to be arranged.

THIRD TERM.—Five times a week.
Book recommended: Ellenberger.

Required in the third year of the Course in Veterinary Medicine.

Dr. FISCHER.

11. FORENSIC VETERINARY MEDICINE—Lectures. Hours to be arranged.

SECOND TERM.—Four times a week.
THIRD TERM.—Once a week. Professor DETMERS, Dr. WHITE.

Required in the third year of the Course in Veterinary Medicine.

12. EXTERIOR OF HORSES—Lectures and demonstrations of live animals, skeletons, preparations, etc. Hours arranged.

FIRST TERM.—Four times a week. Professor DETMERS.

Required in the third year of the Course in Veterinary Medicine.
For facilities, see LABORATORIES AND EQUIPMENT.

ZOOLOGY AND ENTOMOLOGY.

1. ZOOLOGY—Lectures, Recitations and Demonstrations. Three times a week. M, W, at 10¼.
Sec. I, F, at 9¼; Sec. II, at 10¼; Sec. III, at 1½; for two hours.

FIRST TERM. } Lectures and Recitations two hours on Systematic Zoology
SECOND TERM. } and Morphology, and one hour devoted to examinations and dissections of types.

THIRD TERM.—Entomology substituted for General Zoology. The same method of study is pursued.

Text-books required: Dodge's Practical Zoology, Comstock's Introduction to Entomology. Recommended for reference: Claus and Sedgwick's Text-book of Zoology, Saunder's Insects Injurious to Fruits, Packard's Forest Insects.

Professor KELLICOTT.

Required in the Freshman year of the Course in Agriculture, and Horticulture and Forestry, and in the first year of the Course Preparatory to the Study of Medicine.

2. ZOOLOGY—Laboratory. Three or five hours a week credit, according to course, extending through the year. Lecture, W, at 11½. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

An advanced course in Zoology and Anatomy. Professor KELLICOTT.
Course 2 must be preceded by course 1 or 3.

3. COMPARATIVE ANATOMY—Laboratory. Three hours a week credit. Lecture, Tu, at 8¼. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

FIRST TERM.—Comparative Osteology.
SECOND TERM.—Myology, Neurology, etc.
THIRD TERM.—A critical study of vertebrate types.

Text-book required: Wiedersheim's Comparative Anatomy. Supplied as reference by the Laboratory: Owen's Comparative Anatomy, Wilder and Gage's Animal Technology, Ecker's On the Frog, Jordan's Manual of the Vertebrates, and other guides. Professor KELLICOTT, Mr. MCGREGOR.

Required in the third year of the Course Preparatory to the Study of Medicine.

4. ECONOMIC ENTOMOLOGY—Lectures and Field Work. M, Tu, W, Th, F, 8¼ to 4½.

THIRD TERM.—Three hours a week. The collecting, rearing and preserving of insects, and practice in spraying and other means of controlling insect pests. Text-book—Weed's Insects and Insecticides.

Professor KELLICOTT.

Required in the second year of the Short Course in Agriculture.

5. ECONOMIC ENTOMOLOGY—Lectures and Laboratory. Laboratory open M, Tu, W, Th, F, 8¼ to 4½.

THIRD TERM.—Three hours a week. Advanced work in Systematic and Practical Entomology. Professor KELLICOTT.

Required of Juniors in Agriculture, and in Horticulture and Forestry.
Course 5 must be preceded by course 1.

[NOTE REGARDING COURSE 5: Juniors in Horticulture and Forestry are required to take in the third term, five hours of Economic Entomology; they will enter the three-hour class with the Juniors in Agriculture, and devote two additional hours to Orchard and Forest Insects.]

6. ADVANCED ENTOMOLOGY—Laboratory open M, T, W, Th, F, 8¼ to 4½.

Thorough study of single groups or along definite lines of work arranged by the instructor with each student. Professor KELLICOTT.

7. SYSTEMATIC ZOOLOGY—M, W, F, at 8¼.

THIRD TERM.—Three times a week. The course is arranged especially for those who intend later to study Comparative Anatomy (Zoology 3), or Paleontology. Professor KELLICOTT.

Required in the Freshman year of the Course in Science.
For facilities, see LABORATORIES AND MUSEUMS.

The School of Law.

ORIGIN AND LOCATION.

This School of the University originated by resolution of the Board of Trustees passed June 23, 1891, as follows:

"*Resolved*, That a Law Department be established in the University, and that the fees received from the students in such Department be appropriated for its support."

A committee appointed at the same time drew up the detailed plan of organization, and the first session opened Thursday, October 1, 1891, with thirty-three students. The regular exercises of the School are held in Orton Hall.

Attention is called to Columbus as a place in which to study law. Here the Legislature meets; here are the Supreme Court; the Circuit Court; four branches of the Common Pleas Court, in almost daily session throughout the school year; the Probate Court; the County Commissioners; the City Court; and several Magistrates' Courts; also the U. S. Circuit and District Courts. All are easy of access from the School. "There is no place where law is learned so quickly and thoroughly as among lawyers. No teaching is so effective as the object lessons of the trial of cases in court."

GENERAL PLAN.

It is the purpose of the School to furnish such a legal training as will secure the most favorable judgment of the profession, and such as will fit students for practice in any part of the country. The methods of instruction combine the advantages of all approved systems and appliances—the lecture system, the text-book and recitation system, and the case system.

Charts, outlines, analyses, essays, note-books, oral and written lectures, reviews and examinations are used and exercises in drafting contracts, abstracts, conveyances, wills, protests, mercantile contracts, pleadings, indictments, and other legal papers are given, while briefs, arguments in moot courts, etc., are required. Attention will be given to the study and accurate analysis of leading cases.

The aim is to teach an accurate knowledge of the principles of the law, and to illustrate the application of these principles to the practical affairs of life—to teach students both to know and to apply the law. The instruction offered includes an Undergraduate Course containing three years of nine months each, and a Graduate Course of one year. The former requires about fifteen hours of lecture and recitation work per week, each year, and embraces all the elementary and practical studies necessary for admission to the bar of any state administering the Common Law. The Graduate Course is designed for those seeking special instruction in a particular line, or desiring to take a course of a more practical character.

REQUIREMENTS FOR ADMISSION.

I. All applicants must present certificates of good moral character, and must be at least eighteen years of age.

II. *To the Junior Class:* Applicants for admission to the Junior Class must present satisfactory evidence (by teacher's certificate, high school, academy, or college diploma, or by examination), of having a good common school education, including U. S. History.

III. *To the Middle Class:* In addition to the requirements for admission to the Junior Class, applicants for admission to the Middle Class must present satisfactory evidence (by certificate of some practicing attorney, or certificate from an approved law school, or by examination) of having completed the work of the Junior year, or its equivalent.

IV. *To the Senior Class:* In addition to the requirements for admission to the Junior Class, applicants for admission to the Senior Class must present satisfactory evidence (by certificate from some practicing attorney, or certificate from an approved law school, or by examination) of having completed the work of the Junior and Middle years, or its equivalent.

V. *For Degree.*—Students seeking a degree must, before the end of the Senior year, present in addition to the requirements above mentioned, satisfactory evidence (by certificate from an approved institution, diploma, or examination) of having completed a course of study equivalent to that required for entering the Junior year in one of the four-year courses at the Ohio State University. The minimum requirement will be substantially covered by the following: Geography, English Grammar, Arithmetic, History of the United States; one term of 12 weeks, 5 hours per week, in each of the following: Rhetoric, Physical Geography, Physiology, and the completion of Wentworth's Elements of Algebra and Gage's Elements of Physics or their equivalents; and in addition, an equivalent of 112 hours per week for one term of 12 weeks chosen from any five or more of the following, one at least to be scientific: Geometry, Trigonometry, Astronomy, Surveying, Civil Engineering, Botany, Geology, Physics, Chemistry, English Literature, French, German, Greek, Latin, General History, English History, English Constitutional History, United States Constitutional History, Political Economy, Logic, Psychology; *provided*, that not less than *ninety-nine* (99) hours of this work have been done in the collegiate department of a college or university which is a member of the Ohio College Association, or if the college or university be situated outside of the State of Ohio, which is of at least equal rank with those in the Ohio College Association. Blanks for application for degree will be furnished on request.

VI. IRREGULAR STUDENTS.

In special cases, students who have had part of the studies in the Junior year and part of those of the Middle year, or part of those of the Middle year and part of those of the Senior year, may be examined on whatever subjects they may choose, and may take part of the studies of both years, if the Faculty is satisfied that the applicants can do so to advantage. If candidates for a degree, such applicants must meet all the other requirements and have all the other qualifications of those seeking a degree.

VII. SPECIAL STUDENTS.

Persons wishing a knowledge of legal principles *for business purposes only*, but not intending to apply for a degree or to take a full course, may be admitted at

any time as special students, and may avail themselves of such advantages of the School as they may deem expedient. Their convenience will not be taken into consideration in arranging classes, and they must make satisfactory arrangements as to fees, hours of recitation, etc., with the Dean or Secretary.

ENTRANCE EXAMINATIONS.

Entrance examinations, except for those seeking a degree, will not be technical, the object being to ascertain the results of previous training, and practical capacity to appreciate the technical study of the law. All entrance examinations will be conducted in writing, and will be held on the Monday and Tuesday preceding the opening of each term.

PRIOR READING OF LAW.

Although prior reading of law is not required for admission, it is, nevertheless very desirable; and it is to be hoped that in the near future this requirement for admission can be made. Before entering the School of Law, careful study of either Walker's American Law, Blackstone's Commentaries, Pomeroy's Municipal Law, Smith's Elements of Law, Powell's Analysis of American Law, Robinson's Elementary Law, or Baird and Babcock's Guide to the Law, will prove of great advantage.

It is believed, also, that all students will be greatly benefited by reading Bishop's First Book of the Law, Hoffman's Legal Studies, Sharswood's Law Lectures, Warren's Law Studies, Washburn's Lectures on the Study and Practice of the Law, or Reed's American Law Studies.

REGISTRATION.

All students are required to register with the Secretary of the School and procure their class cards on the first day of each term, between the hours of 8:30 A. M. and 12 M., or between 1:30 and 4:30 P. M., central standard time.

APPLICATIONS FOR DEGREES.

At the time of registration, all applicants who seek degrees should present their diplomas and certificates of work done. These certificates should state in detail the studies pursued, the text books used, the amount of work done in each study, the amount of time devoted to it, the date of the examination and the rank or standing of the candidate in it. A copy of the course of study should accompany the certificate in all cases, and must accompany it where equivalents are offered. These statements should also be accompanied by information as to age, occupation, experience, and work done since leaving school.

MATRICULATION.

Each student, on being admitted to the classes, will sign the matriculation book at the office of the President.

FEES AND EXPENSES.

For the amount of tuition, cost of board, books, etc., see page 27. Attention is called to the fact that no student is entitled to be admitted to the work of any class except upon presenting to the instructor in charge, a class card countersigned by the Secretary of the Board of Trustees, showing that he has paid the tuition fee for the year.

HOURS OF RECITATION.

The hours of recitation are as much as possible outside of the regular business hours of the day, so that students may be in offices if they so desire. The hours of 1 to 2, 5 to 6, 7 to 9, all in the afternoon, are usually selected. Seniors may attend the Middle and Junior classes, and Middle year students may attend Junior classes, if they so desire.

RULES AND REGULATIONS.

The students will be presumed to be ladies and gentlemen. All are expected to be present at each recitation of the classes in which they are enrolled. Any one absent frequently and without excuse will be admonished, or, in aggravated cases, informed that he cannot be graduated. Furthermore, the Faculty will not hesitate to drop a student from the rolls at any time during the year on becoming satisfied that he is neglecting his work.

EXAMINATIONS.

Examinations are held from time to time to test the student's knowledge of the work he has gone over. These are usually written, but sometimes oral.

THESIS.

Each candidate for a degree is required to prepare and deposit with the Faculty, at least six weeks before the end of the year of graduation, a thesis of not less than fifteen hundred nor more than five thousand words, exclusive of citations of authorities, upon some subject selected by himself with the approval of the professor giving instruction in that division of law from which the subject is chosen.

DEGREES.

The degree of Bachelor of Laws (LL. B.) will be conferred on all who, being twenty years of age and having met the requirements necessary for entrance for a degree, pass satisfactorily the examinations at the close of the Senior year, after having done at least one year's work in the School of Law at the University, and having presented a thesis acceptable to the Faculty.

The degree of Master of Laws will be conferred upon any one who has received the degree of Bachelor of Laws at this University, upon the completion of the studies of the Graduate year, upon satisfactorily passing an examination therein, and presenting a satisfactory thesis, the subject of which has been chosen from the field included in the Graduate year.

CERTIFICATE OF WORK DONE.

Those who have completed the studies of the School, but who have not complied with the requirements for a degree, will be given an official certificate, signed by the President of the Board of Trustees, the President of the University, the Dean and the Secretary of the School of Law showing the work done.

ADMISSION TO THE BAR.

The regular examination for admission to the bar, by the Supreme Court, is held on the first Tuesday in June of each year. Seniors, if eligible, are recommended to take this examination.

COURSE OF INSTRUCTION.

The Course of Study is three years of nine months, or thirty-six weeks each, covering about 1,500 hours of work. It is so arranged that each class will have an

average of three recitations a day, of an hour in length, thereby doing the same amount of work that is done in a regular university course.

The first or Junior year includes a general view of the leading principles of the whole field of the law as found in Robinson's Elementary Law, Walker's American Law, and Blackstone's Commentaries; to these are given over 200 hours. The subjects of Contracts, Agency, Torts, and Criminal Law are studied somewhat in detail during this year, about seventy hours being given to each of these subjects, except Agency, in addition to what is contained in the elementary works before mentioned.

In the Middle year a fairly comprehensive study is made of many leading subjects, such as Private Corporation Law; Pleading; Evidence; Commercial Law, such as bills and notes, partnership, insurance, etc.; Real Property, including mortgages and other liens; Sales (including chattel mortgages), and Bailments, under which the subject of Carriers will be extensively treated; Wills, Insurance, etc.

In the third, or Senior year, one-half of the time is devoted to Practice, including Federal Practice, Supreme Court Practice, Common Pleas Practice, Probate Practice, Appeals, Error, Extraordinary Legal Remedies, Special Proceedings, Office Practice, Conveyancing, etc. The other half is devoted to Equity, Constitutional Law, International Law, Conflict of Laws, Measure of Damages, General Jurisprudence, Legal Ethics, etc.

COURSE OF STUDY.

JUNIOR YEAR.

Study.	Text Book.	Term.	Recitations per week.
Elementary Law and Domestic Relations	Robinson's Elementary Law, Walker's American Law and Blackstone	1, 2, 3	5
Contracts	Bishop	1, 2	3
Agency	Story or Mechen	3	2
Torts	Cooley	1, 2, 3	2
Study of Cases	Wambaugh	2	2
Criminal Law	Bishop	2, 3	2
Common Law Pleading	McKelvey	3	2
Moot Court		1, 2, 3	1

MIDDLE YEAR.

Corporations, Private	Beach or Morawetz	1, 2	2
Partnerships and Bills and Notes	Parsons, Tiedeman	1, 2, 3	2, 3, 3
Wills	Schouler	1	2
Real Property	Tiedeman and Cases	1, 2, 3	3
Evidence, and Construction of Contracts	Greenleaf, Vol. 1, Jones, Constn. Com. and Trade Con	1, 2, 3	2
Sales and Bailments	Tiedeman, Schouler	1, 2, 3	2
Pleading	Bryant	1, 2	2
Insurance	Richards	3	3
Moot Court		1, 2, 3	1

THIRD OR SENIOR YEAR.

Equity Jurisprudence, and Statute Law	Tiedeman, or Bispham Cases and Lectures and Bishop on Written Laws	1, 2, 3	2
Conveyancing, Examination of Abstracts, Office Practice, etc		1, 2, 3	2
Probate Practice, Trials, Provisional Remedies, Special Proceedings, etc		1, 2, 3	2, 4, 3
Circuit and Supreme Court Practice, Extraordinary Legal Rem., Error, etc		1	2
Federal Practice		1, 2, 3	1
International Law, Conflict of Laws, etc	Story on Conflict of Laws	1, 2	2
Constitutional Law, Federal and State	Cooley	1, 2	2
Measure of Damages		1	2
Jurisprudence	Holland	2	2
Public Corporations		3	2
Legal Ethics		3	1

MOOT COURT.

Juniors and Middle Year Students will have Moot Court, under the supervision of the Dean, throughout the year, Juniors in Justices' practice, and Seniors in Common Pleas practice, not less than one hour each week, Each of the latter will have the opportunity to act as Associate Judge, Clerk or Sheriff, as well as attorney in cases. The object of the Moot Court work is to give practical insight into the conduct of trials, examination of witnesses, production of evidence, etc.

GRADUATE INSTRUCTION.

(A) General Subjects.

Provision is made for Graduate instruction in the following subjects: Contracts, Mercantile Law, Corporations, Railroad Law, Insurance Law, the Law of Real Property, Jurisdiction and Procedure in Equity, Domestic Relations, Admiralty, Roman Law, American Constitutional History, American Constitutional Law, English Constitutional History, English Constitutional Law, Comparative Jurisprudence, General Jurisprudence, Political and Social Science.

The Graduate work in the subjects above named will be conducted in the following manner: At the opening of the University year each student will be required to select three subjects to which the work of the year will be devoted. One of these will be designated the major subject. To this he will be expected to give his best energies, and to make his investigations therein thorough, comprehensive and exhaustive. To the other subjects, known as minors, he will give such attention as his time will permit. The work required in the minor lines will be of a more general character, and, although thorough so far as prosecuted, will be less extended than that of the major subject. By special permission from the Faculty, a student may devote all his time to one subject. Each student will be under the special guidance of the professors in whose departments his subjects lie. He will receive from each full instruction as to the questions to be investigated and as to to the nature and direction of his work, and also such individual assistance as may be needed from time to time during the progress of his studies. Periodical reports and examinations upon work assigned will be required, at which times the professor in charge will go over carefully with the student the ground covered since the last report, and make such criticisms and suggestions as may be necessary.

(B) Practice.

A Graduate course in Practice has been provided in the Common Pleas, Appellate, Probate, Federal Court and Office Practice, and in the interpretation and construction of Contracts and Statutes.

Each student will be required to prepare a thesis upon some question connected with his major subject. This production must be scholarly and exhaustive, and the author must be prepared to defend the positions taken therein.

Graduate students are expected to attend all lectures not in the regular courses. All undergraduate courses are open to graduate students without extra charge.

Graduate instruction covers one year, and actual residence is required.

Those who take the Graduate work, but who are not entitled to a degree, will be given a certificate.

TEXT-BOOKS AND BOOKS OF REFERENCE.

The text-books needed by the student are indicated in the Course of Instruction as above given. These text-books are such as every lawyer will want in his library after entering upon the practice of his profession. An intimate acquaintance and familiarity with a few good text-books will be of more service than a vague acquaintance with many. Notice will be given at the opening of the year, or of each term, as to what books will be needed for the regular work. The student's labor will be greatly facilitated if he can also have at hand at all times standard works upon the more important branches of the law. Such books will be found essential in subsequent practice. Members of the Faculty will, at any time, aid in making judicious selections. Nearly all of the following list can be found in the University Library, the State Law Library, or the State Library:

Abstracts of Title—Curwin, Martindale, Moore, Warvelle.

Agency—Evans, Mechem, Story, Wharton.

American Law—Bishop, Bouvier, Kent, Minor, Powell, Smith, Walker, Wharton.

Ancient Law—Maine.

Bailments—Edwards, Schouler, Story.

Bills and Notes—Ames's Leading Cases, Bigelow's Leading Cases, Byles, Daniels, Edwards, Norton, Parsons, Randolph, Story, Tiedeman.

Blackstone—Blickensderfer, Browne, Broom and Hadley, Chase, Chitty, Cooley. Devereaux, Kinne, Dickson, Dunlap, Hammond, Sharswood, Sprague,

Carriers—Angell, Hutchinson, Lawson, Thompson.

Civil and Roman Law—Ames, Cooper, Domat, Gaius, Grapel, Hadley, Humphrey, Hunter, Justinian, Kauffman, Lindley, Mackeldy, Mackenzie, Montesquieu, Moyle, Muirhead, Roby, Rutherford, Sampson, Sandars, Taylor, Thorpe, Wood, Wynne, Wyatt.

Common Law History—Bigelow, Crabb, Digby, Hall, Holmes, Reeves, Spence's Equity Jurisprudence of Court of Chancery.

Early Treatise—Blackstone, Bracton, Britton, Coke, Finch, Fleta, Fortesque, Glanville, Littleton, Perkins, St. Germain, Wooddeson.

Government—American Statesman Series, Bryce's American Commonwealth, Fiske's American Political Ideas, Jameson's Constitutional Conventions, Johnston's American Politics, Lalor's Cyclopedia of Political Science, Lieber's Civil Liberty and Self-Government, Mulford's The Nation, The Statesman's Year Book, Wilson's The State, Woolsey's Political Science.

Maxims—Bacon, Broom, Hemming, Morgan, Wharton.

Early Abridgments, etc.—Bacon, Brooks, Comyns, D'Anvers, Dane, Fitzherbert, Petersdorff, Rolle, Viner, Wood. Year books.

Constitutional History and Law, American—Bancroft, Cooley, Curtis, Farrar, Frothingham, The Federalist, Fiske, Hildreth, Kent, McMaster, Miller, Pomeroy, Poore, Schouler, Sedgwick, Sterne, Story, Tiedeman, Towle, Van Holst.

Constitutional History and Law, English—Amos, Bagehot, Chalmers, Creasy, De-Lolme, Forsythe, Gneist, Hallam, Hargrave, May, Selden, Stubbs, Taylor, Taswell-Langmead.

Contracts—Addison, Anson, Bishop, Chitty, Keener, Langdell, Lawson, Metcalf, Parsons, Pollock, Pomeroy, Smith, Story, Wharton.

Conveyancing—Abbott, Curtis, Jones, Martindale, McCall, Oliver, Sayler.

Corporations—Angell and Ames, Beach, Boone, Cook, Dillon, Field, Greenough, Morawetz, Murphy, Spelling, Taylor, Thompson, Tiedeman, Waterman.

Criminal Law—Bishop, Browne, Clark, Desty, Harris, May, Roe, Stephen, Washburn, Wharton, Wilson.

Damages—Eggleston, Mayne, Sedgwick, Sutherland.

Domestic Relations—Bishop, Browne (I), Browne (W. H.), Reeve, Schouler, Smith, Stewart, Wood.

Equity—Adams, Barton, Beach, Bigelow, Bispham, Pattee's Cases, Pomeroy, Snell, Stroy, Tiedeman.

Equity Pleading and Practice—Barton, Curtis, Daniel, Heard, Hughes, Mitford, Story.

Evidence—Abbott, Best, Greenleaf, Phillips, Reynolds, Rice, Rogers, Roscoe, Starkie, Stephen, Wharton, Wood.

Insurance—Arnold, Biddle, Bliss, Clements, May, Phillips, Parsons, Richards, Wood.

International Law—Gallaudet, Grotius, Hall, Halleck, Phillimore, Puffendorf, Twiss, Vattel, Wharton, Wheaton, Woolsey.

Jurisprudence—Amos, Austin, Dillon, Heron, Holland, Lorimer.

Medical Jurisprudence—Beck, Bucknell and Tukes, Cooper, Dean, Ewell, Fleming, Field, Guy, Ordronaux, Taylor, Tidy, Wharton and Stillé.

Mortgages—Boone, Cobbey, Hilliard, Jones, Pierce, Pingrey and Wiltsie.

Negligence—Beach, Deering, Saunders, Shearman and Redfield, Wharton, Whitt-aker's Smith.

Partnership—Bates, Collyer, Lindley, Parsons, Pollock, Story.

Patents—Curtis, Merwin, Robinson, Walker.

Personal Property—Benjamin, Brantley, Darlington, Hilliard, Schouler, Smith, Story, Williams.

Pleading, Code—Bates, Bliss, Boone, Bryant, Kinkead, Maxwell, Nash, Pomeroy, Seney, Swan, Yaple.

Pleading, Common Law—Chitty, Gould, Heard, McKelvey, Stephen, Shipman, Swan.

Pleading, Criminal—Archbold, Bishop, Heard, Wharton.

Pleading, Equity—Barton, Curtis, Daniel, Heard, Hughes, Tyler's Mitford, Story.

Railways—Beach, Pierce, Redfield, Rover, Wood.

Real Property—Ballard, Boone, Cruise, Jones, Teideman, Washburn, Willard, Williams.

Sales—Adams, Baker, Benjamin, Blackburn, Browne, Newmark.

Taxation—Burroughs, Cooley, Desty, Hilliard.

Torts—Addison, Ames's Cases, Ball's Cases, Bailey, Bigelow, Bishop, Buswell Chase's Cases, Cooley, Hilliard, Moak's Underhill, Pollock, Tiffany, Weeks, Wood.

Uses and Trusts—Gilbert, Perry, Sandars.

Wills—Beach, Cassody, Hawkins, Jarmon, Powell, Preston, Proffatt, Redfield, Roper, Schouler, Thornton, Woerner, Wigram.

LIBRARIES.

The following libraries are accessible to the student:

1. The Law Library of the School contains the Noble Law Library and Ohio State Reports, about 1,100 well selected volumes. It is shelved with the other libraries of the University, in Orton Hall. The recent gift of Emerson McMillin will permit large additions, which are now being made.

2. The University Library, containing more than 13,000 volumes of very carefully selected books upon all subjects. This is quite complete in the more recent standard works upon history and political science, philosophy, etc. A good collection of the leading scientific, technical and literary magazines and journals is to be found here.

3. The State Law Library, of about 15,000 volumes—the largest and most complete law library in the State. It contains complete sets of the English, Scotch, Irish, Canadian, United States, and State Reports, Statutes and Digests, as well as all of the important text-books, and leading periodicals published. This library is located in the State House, and because of the small space available, must be used with great care and discretion in order that all may be served. It is designed wholly for reference and students are warned that they must not use the library rooms as a place for preparing their lessons, and that the text-books found here are to be used for reference only. No student is expected, nor will he be permitted, to use these books instead of providing himself with those required in the course.

4. The State Library, in the State House—a library of general literature, history, science, biography, political and social science, philosophy, etc., comprising some 62,000 volumes. The leading magazines, journals, etc., are also to be found here.

in which the University is in session, and on Saturdays from 9 A. M. until 12 M. and

The University Libraries are open from 8 A. M. to 5 P. M. during the five days from 1:30 P. M. until 4:30 P. M. The State Law Library is open six days in the week, from about 8:30 A. M. to 5:30 P. M., with the exception of about an hour or an hour and a half at noon. The State Library is open six days in the week from 9 A. M. to 12 M., and from 2 P. M. to 5 P. M., and when the Legislature is in session, from 7 P. M. to 9 P. M.

The City Library also may be used by students under reasonable restrictions.

ADVANTAGES OFFERED IN THE UNIVERSITY COURSES.

Attention is called to the great advantage of attending a law school in close and vital connection with a University affording the means of a liberal, practical and technical education. Students who are disposed to work faithfully may, at the same time that they are acquiring a technical knowledge of the law, supplement their general education by joining University classes, in departments which they may elect, subject to the requirements for admission to such departments without extra charge, except for laboratory work. Not alone from the courses in History and Political Science, or from those in Mental and Moral Philosophy, should this work be selected, but also from the courses in Civil, Mining, Mechanical and Electrical Engineering, from the courses in Anatomy and Physiology, Economic Geology, etc. To the average practitioner, there will come ten questions involving the

principles of surveying or engineering to one of constitutional law, or English history. Not a day passes in the litigation of the courts but that numerous questions of anatomy, physiology, surveying, or engineering arise and are to be decided. Particular attention, therefore, is called to the technical courses afforded by the University, which will be open to those in the School of Law who are able to take them without interfering with the required legal work. The following courses are enumerated as being likely to prove beneficial to those who have not had such training as would enable them to take more technical work. The references are to the courses as described on the preceding pages under the Collegiate Department: Botany, 3; Physiology, 1 and 2; Veterinary Medicine, 1; Physics, 8; Civil Engineering, 13; Mine Engineering, 1; Chemistry (Toxicology), 5; Geology, 3 and 4; Philosophy, 1, 2, 3, 4 and 5; History, 1, 2, 3 and 4; English 1, 2, 8, 3, 4, 5, 9 and 10.

Those who desire any further information concerning this school of the University may address letters to William F. Hunter, Dean, 18 Board of Trade, or Horace L. Wilgus, Secretary, 33 Deshler Block, Columbus.

THE PREPARATORY DEPARTMENT.

STANDING COMMITTEE.

President SCOTT, *Chairman, Ex-officio; Professor* KELLERMAN, *Secretary.*
Professors DERBY, THOMAS, BOHANNAN, EGGERS, and WILSON.

GENERAL INFORMATION.

This Department is under the immediate control of a standing committee of the Faculty, which supervises the studies of pupils and their relations to the University. The pupils are subject, in general, to the same rules and regulations as the students of the Collegiate Department. Their attendance at the University is required only during the hours of recitation and of other prescribed college exercises, such as drill and chapel. The classes are under the supervision of the college professors and are taught by the professors in person or by their assistants.

REQUIREMENTS FOR ADMISSION.

Applicants for admission to the Preparatory Department must be at least fifteen years of age, and must be provided with credentials of scholarship from their last instructor or the last school with which they have been connected. Applicants are admitted by certificate or by examination.

The entrance examinations for 1895 will be held at the University on Monday and Tuesday, June 10 and 11, and on Monday and Tuesday, September 9 and 10.

ADMISSION BY CERTIFICATE.

Applicants for admission to the Preparatory Department holding diplomas or certificates from high schools or academies; and applicants holding teachers' certificates of twelve months, valid when presented at the University, are admitted without examination on the subjects covered by their diplomas or certificates, *provided* written evidence is offered that the amount and quality of the work represented by the diplomas or certificates is equivalent to that required for admission and is sufficient to enable them to continue the work of the Preparatory Department in those subjects. On the subjects not covered by their diplomas or certificates, or only partly covered, they must pass satisfactory examinations.

ADMISSION BY EXAMINATION.

Other applicants for admission to the Preparatory Department must pass satisfactory examinations in one of the following groups of subjects:

I. Applicants for admission to the Preparatory Department who are preparing for the Collegiate Course in Arts, or for the Collegiate Latin Course in Philosophy, will be examined in the following group of subjects:

1. *English*—Harvey's English Grammar or an equivalent; Genung's Outlines of Rhetoric or an equivalent; and an essay of about five hundred words, to be written in the presence of the examiner, correct in spelling, grammar, punctuation, capital letters, sentential structure and paragraphing. The subjects for 1895 will be taken from the following works, with the substance of which—the plots, incidents, char-

acters, etc.—it is expected that the candidate will make himself thoroughly familiar: Shakespeare's Twelfth Night; Scott's Abbot; Irving's Sketch Book; Longfellow's Evangeline. The subjects for 1896 will be taken from Shakespeare's A Midsummer Night's Dream; George Eliot's Silas Marner; Macaulay's Essays on Milton and Addison; Milton's L'Allegro, Il Penseroso, Comus and Lycidas.

For securing the proper preparation, the following course is recommended: 1st, A few lessons and constant practice in the proper use of the Unabridged Dictionaries. 2d, A thorough mastery of the elements of English Grammar. 3d, Daily recitations for at least one term in some such work as Genung's Outlines of Rhetoric. 4th, Weekly exercises in original composition, for at least oneyear. Scott and Denney's Paragraph Writing is recommended to teachers as a guide. 5th, A careful reading of the works enumerated above.

2. *Geography*—Eclectic Number Three and Geikie's Physical Geography; or equivalents.

3. *History*—Johnston's History of the United States and Myers's General History; or equivalents.

4. *Civil Government*—Fiske, or Thorpe.

5. *Arithmetic*—Ray's Practical, White, or equivalent.

6. *Algebra*—Wentworth's or Wells's Elements, complete, or an equivalent.

7. *Latin*—Pronunciation (the Roman method preferred); Grammar (Allen and Greenough's, revised edition, preferred); Cæsar, the first four books of the De Bello Gallico; Cicero, the four orations against Cataline and the orations for Archias and Marcellus; History of Rome (Pennel's preferred).

II. Applicants for admission to the Preparatory Department who are preparing for the Collegiate Modern Language Course in Philosophy or for the Collegiate Course in Science may substitute for the *Latin* examination of the preceding group, an examination in *French* (as below) or in *German* as follows: Otis's German Grammar, complete, or an equivalent; Neue Anecdoten, Anderson's Bilderbuch Ohne Bilder, and Heyse's Drei Novellen, or an equivalent amount of reading.

III. Applicants for admission to the Preparatory Department who are preparing for the Collegiate English Course in Philosophy will be examined in the English, Geography, History, Civil Government, Arithmetic and Algebra, mentioned in the first group above, the same as applicants preparing for the Collegiate Course in Arts, and must also pass satisfactory examinations in the following:

1. *English Language* and *Literature*, and *English History*—Pancoast's Outlines of English Literature, and Meiklejohn's The English Language, or equivalents. A knowledge of the writings of representative authors in each period of English Literature is also required. Montgomery's English History is also required.

2. *Chemistry* (Williams), *Geology* (Geikie), *Zoology* (Packard), *Physiology* (Martin), *Astronomy* (Young), or equivalents. The candidate may offer any two of these Sciences.

3. *French, German, Latin*—But in place of the *English Literature, English History*, and the *Sciences* just mentioned, the applicant may present

(*a*) *French*—The whole subject of French Grammar. Candidates will be expected to read at sight easy French, and to translate correctly into French simple English sentences. Two years ought to be given to this study, the first year being spent mainly on the Grammar, and the second devoted to reading good modern French. The texts read should be chiefly narrative and conversational prose; modern, rather than classic, dramas should be read. Or the applicant may present

(*b*) *German*—The same as applicants preparing for the Collegiate Modern

Language Course in Philosophy, in the amount stated in the second group, above. Or the applicant may present

(*c*) *Latin*—The same as applicants preparing for the Collegiate Course in Arts, in the amount stated in the first group, above.

IV. Applicants for admission to the Preparatory Department preparing for the four-year Collegiate Course in Agriculture or for the Collegiate Course in Horticulture and Forestry will be examined in the English Grammar, Rhetoric, Geography, United States History, and Arithmetic mentioned in the first group above, the same as applicants preparing for the Collegiate Course in Arts. They will also be examined in Venable's Easy Algebra complete, or an equivalent.

V. Applicants for admission to the Preparatory Department who are preparing for any of the Collegiate Courses in Engineering or for the Collegiate Course in Industrial Arts will be examined in the English, Political Geography, United States History, Arithmetic and Algebra mentioned in the first group above, the same as applicants preparing for the Collegiate Course in Arts, and must also pass a satisfactory examination in *one* of the following subjects:

(*a*) *Physical Geography*—Geike's preferred.
(*b*) *Physiology*—Martin, (briefer course).
(*c*) *Astronomy*—Young's.
(*d*) *Civil Government*—Fiske, or Thorpe.
(*e*) *General History*—Myers.
(*f*) *English Literature*—Pancoast or Shaw.

FEES AND EXPENSES.

For information in regard to fees and other expenses, consult page 27.

COURSE OF INSTRUCTION.

The course of instruction covers a period of one academic year. Each study occupies five hours a week, or one daily recitation.

Pupils preparing for the Collegiate Arts or Latin Philosophical Course will continue the study of Latin; those preparing for the Modern Language Philosophical Course, or for the Science Course will continue the study of either Latin or German. Pupils preparing for the Collegiate English Course in Philosophy will be assigned to such studies of the preparatory year as will in each individual case, in view of the subjects offered for admission, most advantageously meet the requirements of the Freshman year of that Course. Those preparing for the four-year Collegiate Course in Agriculture, or for the Collegiate Course in Horticulture and Forestry, any of the Engineering Courses, or for the Course in Industrial Arts, will be assigned studies in the Freshman year of those Courses in place of the Latin and German of the Preparatory Department. Pupils securing, at the time of their admission, credit in any of the studies of the Preparatory Department will also be assigned studies in the Freshman year of the Courses for which they are preparing, in place of studies for which they secure credit.

First Term.	Second Term.	Third Term.
Plane Geometry. (*Wentworth.*)	Solid Geometry. (*Wentworth.*)	Trigonometry. (*Wentworth.*)
Physics. (*Carhart and Chute.*)	Physics. (*Carhart and Chute.*)	Botany. (*Gray.*)
Latin (*Aeneid and Antiquities.*) or German (*Grammar and prose.*) (*Heise—L'Arrabiata.*) (*Jütting—Wanderungen im Reiche der Natur.*)	Latin (*Aeneid.*) or German (*Freitag—Bilder aus dem Mittelalter.*)	Latin (*Prose Composition.*) or German (*Klein—Witterungskunda.*)
Military Drill.	Military Drill.	Military Drill.

EXAMINATIONS AND STANDING.

In accordance with the rules of the Faculty, a written examination of the class is held at the close of each term, and the standing of the pupils is reported as "passed with merit," "passed," 'conditioned," or "failed."

Pupils conditioned in any study at the close of a term are held for examination in that study during the following term at such time as may be designated by the professor in charge of the department in which the condition was incurred.

At the close of each term pupils must pass examinations in studies representing at least ten hours a week in order to retain their connection with the Department. If pupils who have not passed in the requisite amount of work can make good their deficiency by the removal of conditions, they may do so at the beginning of the following term.

Pupils failing in examinations in studies representing ten hours a week, forfeit their connection with the Department.

Pupils who are reported at the end of a term, or at the beginning of the following term, as failed in any continuous study, are dropped from the class in which the failure occurs.

Pupils reported as failed in any examination are required to repeat the study in which they have failed, in the corresponding term of the following year, unless excused by the Committee.

Unexcused absence from any examination is construed as a failure therein.

MILITARY DRILL.

All male pupils, except those who are specially excused by the President of the University, are required to pursue the study of military science, and are enrolled for drill in the battalion.

ATTENDANCE AND DISCIPLINE.

Four demerit marks are recorded against a pupil for every unexcused absense from a class or from drill; two for every unexcused failure in recitation, and one for every unexcused tardiness.

When any pupil has received ten demerit marks, he is admonished by the President.

When any pupil has received twenty demerit marks, notice thereof is sent to his parent or guardian.

When any pupil has received forty demerit marks, his connection with the institution is thereby forfeited.

No account of demerits is continued longer than the close of the academic year.

Degrees Conferred in 1894.

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STUDENTS.

GRADUATE STUDENTS.

RESIDENT GRADUATES.

Charles Lincoln Arnold, M. Sc.	Mathematics	Milan
Kate Ruth Blair, B. A.	German	Columbus
	Ohio Wesleyan University.	
Emma Boyd, B. Ph.	English Literature	Columbus
James Ellsworth Boyd, B. Sc.	Physics and Mathematics	Columbus
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Edith Daisy Cockins, B. A.	History and Economics	Columbus
Charles William Davis, E. M.	Metallurgy and Chemistry	Youngstown
Clair Albert Dye, G. Ph.	Chemistry and Pharmacy	McConnelsville
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James D. Forest, B. A.	Political Science and History	Chicago, Ill
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	Johns Hopkins University.	
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Joseph Russell Taylor, B. A.	English and Philosophy	Chillicothe
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GRADUATES STUDYING IN ABSENTIA FOR THE MASTER'S DEGREE.

Gaius Glenn Atkins, B. A.	History	Greenfield, Mass
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Charles P. Fox, B. Agr.	Zoology	Moscow, Idaho
William Hamilton Hannum, B. A.	Phil. and Pol. Science	Kolhapur, India
Anna Christine Houston, B. Ph.	French and History	Marysville
Bertha Katherine Krauss, B. Ph.	Anglo Saxon	Ottawa
Marion Whitacre, B. Sc.	Zoology	Morrow

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FOUR-YEAR COURSES.

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Lincoln Elmer Andrews	B. Ph. (E)	New Salem

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Charles Alfred Jerome	C. E.	Huntsburg
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Samuel Houston Kanmacher	E. E.	Columbus
Grace B. Keagle	B. Ph. (E.)	Columbus
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William Burns Kirkpatrick, B. A.	E. E.	New Holland

Ohio Normal University.

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Harry Waldo Kuhn	B. Sc.	Etna
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George Martin	E. E.	Fredericksburg
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Elisha Strong Norton.....E. E.....Conneaut
Frank Butler Nichols.....C. E.....Wyoming
Harry Ward Nutt.....E. M.....Youngstown
Walter Collins O'Kane.....B. A.....Columbus
Harold C. Parsons.....E. E.....Mansfield
Mary Baxter Porter.....B. Ph. (E.).....Columbus
Abby Slocum Putnam.....B. Ph. (M. L.).....Columbus
John W. Reed.....E. E.....Columbus
Howard Sterling Riddle.....E. E.....Columbus
William Clyde Roberts.....C. E.....Galena
Ellis Todd Rohr.....E. E.....Groveport
Nellie Roney.....B. Ph. (L.).....Marysville
Henry Allison Rowley.....M. E.....Lorain
William H. Rudge.....C. E.....Youngstown
Charles Eugene Schaup.....E. M.....Tiffin
Ida Llewellyn Schille.....B. A.....Columbus
Minona Schwier.....B. A.....Columbus
Ernest Scott.....B. Sc. (Agr.).....Columbus
John Hayes Scott.....C. E.....Cambridge
Stanley Rush Sharts.....C. E.....Dayton
William Siddall.....M. E.....Cleveland
Edward Trevitt Smith.....B. Sc.....Holden
Charles Milton Snider.....B. Sc. (Ind. Arts).....Columbus
Walter Austin Snow.....E. E.....Austinburg
Thomas Campbell Southard.....B. A.....McConnelsville
William Ralph Sprague.....B. Ph. (E.).....Raymonds
Esther Stafford.....B. Ph. (E.).....Columbus
Frank M. Stinsman.....E. E.....Fletcher
Melvin H. Stover.....E. M.....Sabina
Edward Reynolds Tarr.....E. E.....Wellsburg, W. Va
Pearl Valeria Taylor.....B. A.....Columbus
Julius Theobald.....E. E.....Columbus
James Oscar Thomas.....C. E.....Columbus
Frederick L. Turner.....B. A.....Columbus
Marion Evans Twiss.....B. A.....Columbus
Margaret Anna Uncles.....B. A.....Columbus
Nettie Walsh.....B. A.....Columbus
Edward Thomson Watson.....B. Sc.....Good Hope
Arthur L. Webb.....M. E.....London
Sherman Tecumseh Wiggins, LL. M.....B. Ph. (M. L.).....Columbus
LL. B., University of Michigan.
Charles Lyman Wood.....E. M.....Youngstown
Raymond Zirkel.....E. E.....Columbus

FRESHMEN.

Arthur G. Abbott.....B. Sc. (Agr.).....Medina
John Vincent Abbott.....E. E.....Waterbury, Conn
James Way Allbritain.....C. E.....Columbus
Edna Armstrong.....B. Ph. (E.).....Columbus
Charles E. Atkinson.....B. A.....Pataskala
Samuel Dana Ayers.....B. Sc. (Agr.).....Hartsgrove
Estella Bachtell.....B. Ph. (E.).....Columbus
Philip Baer, jr.....B. Sc. (Agr.).....Canal Dover

Clifford White Bailey.....E. E.....Columbus
Hugh Allen Baldwin.....B. Ph. (L.).....Columbus
Linus R. Baldwin.....B. Sc. (Agr.).....Tiger
George Gaylord Ball.....B. A.....Columbus
Emilia Balz.....B. Ph. (E.).....Columbus
Gay Bancroft.....B. A.....Columbus
Helen M. Barlow.....B. Ph. (L.).....Columbus
Charles London Barnaby.....C. E.....Columbus
Harry Halbrook Barrows.....C. E.....Columbus
Orsamus Drake Beardsley.....B. Ph. (E.).....Garrettsville
Lyman Beecher.....E. E.....Hillsboro
James Warner Birdsall.....B. Sc. (Agr.).....Green Springs
Walter Robinson Blake.....C. E.....Sidney
Harry W. Bock.....B. Ph. (L.).....Canton
Mary Elizabeth Bodman.....B. Ph. (L.).....Bement, Ill
Charles Grosvenor Bond.....E. E.....Columbus
Harley Oscar Bostwick.....C. E.....Mt. Sterling
Harry Luther Bowers.....B. Ph. (M. L.).....Mansfield
John Carr Britton.....B. Sc. (Agr.).....Mt. Gilead
James Francis Brophy.....E. M.....Granite Mountain, Mont
E. A. Bruggemans.....B. A.....Hilliards
John H. Cameron.....B. Sc. (H. and F.).....Damascus
Harry Chalmers Campbell.....C. E.....Fostoria
Chester Lee Carlisle.....B. Ph. (L.).....Marion
Walter Evans Chappell.....E. E.....Barnesville
Albert Claypoole.....M. E.....Columbus
Rutherford Hayes Cockins.....B. Ph. (E.).....Columbus
Richard E. Cole.....B. Ph. (E.).....Columbus
Frank James Colgan.....E. E.....Columbus
Fred Davis Connolley.....E. E.....Portsmouth
William Roscoe Coons.....C. E.....Arcanum
Martin Vickers Copeland.....M. E.....Columbus
Harry G. Courtney.....B. Ph. (E.).....Gallipolis
Charles Wayne Covell.....C. E.....Rock Creek
Frederick Gregg Craig.....B. Sc.....Cambridge
Charles Gelman Cuuningham.....C. E.....Fostoria
John Thomas Dallas.....B. Sc. (Agr.).....Hopedale
Edgar Denman.....B. Sc. (Ind. Arts).....Columbus
Melvin Dresbach.....B. Sc.....Kingston
Joseph William Tell Duvel.....B. Sc.....Wapakoneta
Pattie McKay Eastman.....B. Ph. (M. L.).....Columbus
Earl Edward Enos.....C. E.....Defiance
Harlan Ensminger.....M. E.....Mt. Vernon
Oscar Ert.....B. Sc. (Agr).....Monroeville
Frank Leslie Estep.....E. E.....Jeffersonville
Ida Louisa Feiel.....B. Ph. (L.).....Columbus
Mary Elizabeth Filler.....B. Ph. (L.).....Columbus
George A. Flickinger.....B. Sc. (Agr.).....York
Benjamin Harrison Flynn.....C. E.....Columbus
Ruth Louisa Ford.....B. A.....Ashtabula
Stanley Hamer Ford.....B. Ph. (M. L.).....Columbus
George D. Freeman.....E. E.....Columbus
S. S. Freeman.....E. M.....Columbus
Edwin Raymond Ganson.....E. E.....Columbus
Frank William Gardner.....B. A.....London

S. Glidden Garrett	E. M.	Pikeville, Tenn.
Eugene C Gee	E. E.	Wheeling, W. Va.
Harry Ogden Geren	E. E.	Columbus
Walton Frampton Geren	B. A.	Columbus
Frank Herbert Goodell	B. Sc. (Ind. Arts.)	Columbus
Emery Graham	E. E.	Richwood
Charles A. Grate	E. E.	Portage
Genevieve Gray	B. Ph. (E.)	Columbus
Paul W. Greene	E. E.	Columbus
Alwood Griffith	E. E.	Constantia
John Welsey Groves	C. E.	Batavia
Claude Bernard Guittard	B. Ph. (M. L.)	New Bedford
William Backus Guitteau	B. Ph. (E.)	Toledo
Charles Edmund Haigler	B. Sc.	Jeffersonville
Frederick James Hale	M. E.	Mogadore
Allen Cary Harris	B. Ph., (M. L.)	Columbus
Herbert Bailey Harrop	B. Sc.	Columbus
William Howard Hartsough	B. Ph. (E.)	Columbus
Florence Danford Harvey	B. Ph. (M. L.)	Mt. Perry
Harry Clyde Hawkins	E. E.	Lima
Robert Lee Hayes	M. E.	Columbus
Birdie Hazelton	B. Ph. (E)	New Straitsville
Edith Selma Herms	B. Ph. (M. L.)	Portsmouth
John Edward Hildt	C. E.	Canal Dover
John Merton Hipple	E. E.	Jefferson
George William Hoffman	B. Sc.	Bellaire
Clara Hudson	B. Ph. (E.)	Columbus
Arthur Huntington	M. E.	South Charleston
Amanda Huston	B. Ph. (E.)	Columbus
Gwendolen Ingram	B. Ph. (M. L.)	Columbus
Milton Pettit Jackson	B. A.	Mt. Gilead
Earl S. Johnson	E. E.	Plants
Frederick S. Johnston	B. Sc. (Agr.)	Pierpont
Ada Beatrice Jones	B. Ph. (L.)	Columbus
Arthur James Jones	C. E.	Fitzhenry, Pa.
Herbert L. Kanmacher	E. E.	Columbus
Charles A. Keller	E. E.	Kenton
Ivy Kellerman	B. A.	Columbus
William Erskine Kellicott	B. Ph. (L)	Columbus
Austin King	E. M.	Rogerstown, Pa.
Rannells W. Knauss	E. E.	Columbus
Arthur E. Knecht	M. E.	Cincinnati
Herbert Zettler Krumm	B. Ph. (L.)	Columbus
Louis R. Krumm	E. E.	Columbus
William E. Krupps	B. Ph. (E.)	Uhrichsville
Verne Durand Layton	B. Ph. (E.)	Wapakoneta
George Gurden Leinbaugh	E. E.	Bellevue
Scott Little	E. E.	Yellow Springs
Arthur Emanuel Loeb	E. E.	Columbus
Walter B. Lydenberg	B. A.	Dayton
Charles Edmund Lynas	B. A.	Columbus
Hugh Madden	E. E.	Columbus
Robert E. Marshall	B. Ph. (E)	Sidney
Leonard Rowland Martell	B. A.	Columbus
Kirk McClelland	B. Sc. (Agr.)	Andover
William McLaughlin	B. Ph. (E.)	Columbus

Eugene Warren Mendenhall.....B. Sc. (Agr.).....Eugene
Blanche Dell Mickey.....B. Ph. (L.).....Columbus
Harry L. Mills.....C. E.....Columbus
John R. Morgan.....M. E.....Youngstown
Clyde T. Morris.....B. Sc. (Ind. Arts.).....Columbus
Blanche Moss.....B. A.....Columbus
Theodore Schwabe Munson.....B. Sc.....Zanesville
Robert Reasoner Nevin.....B. A.....Dayton
J. Jannette Nobles.....B. Ph. (E.).....Middleport
Jessie Eagleson Oglevee.....B. Ph. (E.).....Columbus
Robert J. Pabodie.....M. E.....Wyoming
Joseph Amburg Parrott.....C. E.....Circleville
Anna Jane Patterson.....B. Ph. (E.).....Columbus
Matthias James Persing.....B. Sc. (H. and F).....Clyde
Arthur Edward Peters.....E. E.....Toledo
Corwin Post.....E. E.....Spencerville
Francis Drake Potter.....B. Ph. (E.).....Columbus
Anna Prall.....B. A.....Columbus
Homer C. Price.....B. Sc. (H. and F.).....Newark
Joseph Morris Ramsey.....E. E.....South Charleston
Russell Kenney Ramsey.....B. A.....Columbus
DeVolson Reed.....B. A.....Columbus
Mabel E. Rice.....B. A.....Columbus
Giles Willard Rich.....C. E.....Rochester, N. Y
Fred Herman Richt.....C. E.....Cincinnati
Oran Ormond Rider.....E. E.....Bettsville
Carlton Riddle.....E. E.....Milford Centre
Lumina Cotton Riddle.....B. Sc.....Milford Centre
Cyrus S. Roberts.....C. E.....Columbus
John L. Roberts.....B. Sc. (Agr.).....Vaughnsville
Mary Fannie Rockwell.....B. Ph. (E.).....Columbus
Robert Murray Roney.....E. E.....Columbus
Robert Daugherty Roy.....C. E.....Glen Roy
Carl M. Ruhlen.....M. E.....Detroit, Michigan
Harry Rumple.....M. E.....Lima
Maida Rutan.....B. Sc. (H. and F.).....Mechanicsburg
Lawrence Andress Sackett.....E. E.....Columbus
John Martin Schreiber.....E. E.....Ironton
James Kemper Scott.....M. E.....Newark
Marley R. Shellabarger.....B. Sc. (Agr.).....Garland
Carey Lucas Shuck.....B. A.....Vanlue
Olive Shurtz.....B. Ph. (E.).....Columbus
Minnie Magdalen Slaughter.....B. A.....Columbus
Arthur Marion Smallwood.....E. E.....Bellevue
Alice May Smith.....B. Ph. (E.).....Columbus
Karl Steinbacher.....B. Sc.....Ironton
Russell Strader.....B. Sc.....Shadeville
Margaret Sutherland.....B. Ph. (L.).....Columbus
Charles Hill Tufts.....C. E.....Columbus
Mary Grace Vance.....B. A.....Columbus
Albert Earl Vinson.....B. Sc.....Dayton
Elmer Louis Volkmor.....B. A.....Massillon
Julius Vornholt.....B. A.....New Bremen
Leonard C. Warden.....B. Sc (H. and F.).....Avon
Charles Wilton Watt.....M. E.....Barnesville

James Gulick Westwater.....C. E.....Columbus
Charles Tryon Whiting.....B. Sc. (Agr.).....Kirtland
Mabel G. Whittaker.....B. A.....Columbus
Andrew Lee Roy Wildermuth.....B. A.....Columbus
Fred Richard Williams.....E. E.....Columbus
Edward Bruce Williamson.....B. Sc.....Bluffton
Albert Joseph Wise.....C. E.....Suffield
Thomas P. Wise.....M. E.....Lodi
Carl Wiseman.....M. E.....Proctorville
Arthur Jacob Wolfe.....C. E.....Chillicothe
Charles Howard Woods.....B. A.....Chillicothe
John Ray Woods.....B. A.....Plain City
W. F. Worcester.....E. E.....Columbus
Burr Roscoe Wright.....B. Sc.....Peebles

SPECIAL.

Walter C. Aston.....C. E.....Zanesville
Arthur Trumbo Balentine.....C. E.....Springfield
Oliver Edward Becker.....E. E.....Chicago, Ill.
George Washington Bope.....B. Ph. (E.).....Pleasantville
Harry Frank Brand.....B. Ph. (E.).....Worthington
Sarah F. Cooley.....B. Ph. (L.).....Columbus
Carson Wiley Damron.....M. E.....Gallipolis
Charles A. Davenport.....B. Sc. (Agr.).....Chillicothe
Florence Derby.....B. Ph. (E.).....Columbus
Jane M. Doren.....B. A.....Columbus
John G. Evans.....B. Ph. (E.).....Shawnee
William Frederick Genheimer.....B. Ph. (E.).....Wheelersburg
James Spahr Glenn.....B. Ph. (E.).....Columbus
David Mathias Griffith.....B. Ph. (E.).....Kecksburg, Pa
Albert Edward Hermes.....B. Sc.....Columbus
Frederick H. Heywood.....B. Ph. (E.).....Columbus
Charles Alfred Hyle.....E. E.....Columbus
Alexander Douglas Ingram.....E. E.....Columbus
Harry P. Junk.....B. Ph. (L.).....Frankfort
William J. Kappes.....E. M.....Zanesville
Gertrude Stowell Kellicott.....B. Ph. (E.).....Columbus
F. A. Koons.....B. Ph. (M. L.).....Canal Winchester
Lucy Markel.....B. Ph. (L.).....Adelphi
Charles W. Martin.....M. E.....Columbus
John H. Mathers.....B. Ph. (E.).....Conover
Emeline McClelland.....B. Ph. (E.).....Columbus
Raymond Carroll Osburn.....B. A.....Columbus
Helen Rich Powell.....B. Ph. (M. L.).....Columbus
Charles Foster Pryor.....B. Ph. (E.).....Hendrysburg
Bella Virginia Pugh.....B Ph. (E.).....Columbus
Walter Scott Rankin.....B. Ph. (E.).....Columbus
Nellie Gehrkins Roberts.....B. Ph. (E.).....Columbus
Eugenia Covert Robinson.....B. Ph. (E.).....Columbus
C. L. Scott.....B. Ph. (L.).....Columbus
Myra Bosworth Smythe.....B. Ph. (E.).....Columbus
Wilbur A. Snediker.....B. Ph. (E.).....Wellsville
William Nixon Stites, C. E.....M. E.....Cincinnati

University of Cincinnati.

Luther Beman Thomas.....B. Ph. (E.).....Jackson
Stella Shoemaker Wilson.....B. Sc.....Columbus

THREE-YEAR COURSES.

COURSE PREPARATORY TO THE STUDY OF MEDICINE.

FIRST YEAR STUDENTS.

Noah W. Beck, Jr.....Wheeling, W. Va.
Frank Raymond Clemson.....Thornville
Edward William Crecelius.....Milan
John Crockett Easton.....Springboro
Ralph William Holmes.....Columbus
John Arthur Long.....Thornville
Harry Silver.....Hamilton

COURSE IN PHARMACY.

THIRD YEAR STUDENTS.

Eulalia Agler.....Columbus
Edward Guy Blaire.....Shawnee
Robert Fischer.....Columbus
Ernest Elwood Harrold.....Beloit
Sherman Lee Harvey.....Harrisburg
Charles White McGuire.....Toledo
Ambrose Middleton.....Lancaster
August Odebrecht.....Columbus
George Searight Sheldon.....Westerville
Burr Homer Slater.....Cherry Valley
Burton Griffin Smith.....Fredericktown
Eustace Elden Southard.....Columbus
Harry Nelson Young.....Columbus

SECOND YEAR STUDENTS.

William Earnest Allaman.....Brookville
John William Birk.....Bucyrus
Felix John Boesche.....New Bremen
John Whitney Brewer.....Columbus
Sylvester Jacob Goodman.....Columbus
Abdel William Kiler.....Clifton
Edward Victor Leffler.....Leipsic
Francis Herbert Obetz.....Columbus
William Henry Reese.....Glen Roy
Austin Welsh Teter.....Springfield

FIRST YEAR STUDENTS.

William Roscoe Bell.....Columbus
Joseph George Braun.....Columbus
Mark Browning.....Dennison
Harry James Bradshaw.....Columbus
Lavone Allen Bunnel.....Waynesville
Guy Olin Castle.....Columbus

William Bartlett Calkins.....Columbus
Orman Lewis Craig.....Atwater
David Samuel Fox.....New Stanton
William Hord.....Columbus
Carlos Huddleson.....Columbus
William Robert Jones.....Tiffin
Hamilton David Kerr.....Tippecanoe City
Malcolm A. Karshner.....Columbus
Arthur Kelton Lawrence.....Columbus
Robert Adam Magby.....Columbus
George Henry Mebs.....Columbus
Eddie Henry Metzgar.....Circleville
Oliver Lovell Spurrier.....Chester Hill
William Lisle Stump.....Nashport
James Leonard Sutphen.....Columbus
John Henry Swan.....Columbus
William Henry Swisher.....Campbellstown

COURSE IN VETERINARY MEDICINE.

THIRD YEAR STUDENTS.

Frank Alexander Hamilton.....Columbus
Rollo Nooman Mead.....Grand Rapids
Norman C. Powell.....Damascus
Frederick Priest.....Newark

SECOND YEAR STUDENTS.

William Francis Jones.....Shandon
Clarence Loveberry.....Somerset

FIRST YEAR STUDENTS.

Oscar Vilos Brumley.....Townwood
Charles Horace Canfield.....Akron
C. Ross Deaton.....Alcony
Charles Edmund.....Thornville
David Artic Emrick.....West Milton
Fred O. Kendig.....Salem
Murray J. Myers.....Louisville
William Morgan Smith.....Basil
Jacob Franklin Stevens.....Northville
Warner Worcester.....Columbus

SHORT COURSES.

SHORT COURSE IN AGRICULTURE.

SECOND YEAR STUDENTS.

Walter E. Cline.....New Vienna
Ray Lutz.....Fremont
Prescott Milliman.....Milan
Venious Ardie Rood.....Nevada

Frank B. Roscoe.....Greenwich
Benjamin Milton Rutan.....Mechanicsburg
James Russell Wells.....Josiah, W. Va.
W. G. Westwater.....Columbus
Joseph Agar Winspear.....New Philadelphia

FIRST YEAR STUDENTS.

John William Beal.....Dresden
Robert Smith Caldwell.....Hickory
Alva Leroy Coddington.....Conover
Clarence A. Clawson.....Okeana
Everett Clyde Darling.....Nellie
Melville Clarence Decker.....Mortimer
Austin Everett Dodds.....Tranquility
Alonzo H. Dunham.....Santa Monica, Cal.
Rollin Fitts.....Elyria
Fred May Foster.....Kingston
William Henry Gilmore.....Lancaster
Frank A. Henderson.....McConnelsville
Walter Centennial Hill.....Berlin Heights
Walter A. Hoff.....Mogadore
Haines Huff.....Leesburg
Marion Imes.....Bashan
Jesse P. Kellough.....Cooks
Joseph L. Mendenhall.....Westland
Farrah C. Murphy.....Condit
Albert Warren Nettleton.....Medina
William Adolphus Patterson.....Kensington
Robert L. Patton.....Surryville
Harvey Cannon Pemberton.....Locust Grove
Frank Monroe Randolph.....Somerset
James Hugh Scroggie.....Olmstead Falls
Smith E. Sweet.....Mesopotamia
Joseph J. Thompson.....Lebanon
Clarence H. Titus.....Avon Lake
Arthur H. Vermillion.....Martin's Ferry
Clarence William Waid.....Emery
Maurice White.....Rix's Mill
Herbert G. Winkler.....Hanging Rock

SHORT COURSE IN MINING.

SECOND YEAR STUDENTS.

John M. Evans.....Shawnee
John Lawrence Darvall Nichols.....Columbus
Evan Rees.....Shawnee

FIRST YEAR STUDENTS.

John W. Bishoff.....Elk Garden, W. Va.
John S. Brophy.....Elk Garden, W. Va.
William George Drummond.....Cleveland

J. E. Deeter.....Boyd
Patrick J. King.....Rogerstown
Alexander McCauch.....Uniontown
William Ralston.....Newman
Russell M. Seward.....Columbus

COURSE IN CLAYWORKING AND CERAMICS.

FIRST YEAR STUDENTS.

Everett Farnhan Braddock.....Richfield
Thomas Pulaski Ferguson.....East Liverpool
Alfred S. Freeman.....Steubenville
Carl Giessen.....Canton
Ebner Eldridge Gorton.....Tonawanda, N. Y.
Edward J. Jones.....Zanesville
Samuel Edward Lyth.....Wellsville
Remus G. Shenkel.....East Liverpool
George C. Simms.....East Liverpool
David C. Thomas.....New Straitsville
John Willard Wolfley.....Delaware

COURSE IN DAIRYING.

Lorenzo S. Condit.....Condit
Mellville Clarence Decker.....Mortimer
Charles Oscar Ewing.....Louisville, Ky.
Darcy B. Grisier.....Fayette
George Washington Gephart.....Franklin
Philip Hiltner.....Landeck
John Miller Karnes.....New Petersburg
Manton Odell Leyda.....Pattersonville
Oscar W. Reed.....Yellow Springs
Martin Schaadt.....Dasie
Oliver Jacob Vine.....Canton

The School of Law.

FACULTY.

WILLIAM HENRY SCOTT, M. A., LL. D.,
PRESIDENT.

WILLIAM F. HUNTER,
DEAN.

GEORGE K. NASH, B. A.,

DAVID F. PUGH,

I. N. ABERNETHY,

JAMES H. COLLINS,

ORLANDO W. ALDRICH, LL. D., D. C. L.,

RUTHERFORD H. PLATT, B. A., LL. B.,

J. PAUL JONES, B. A.,

EMILIUS OVIATT RANDALL, B. PH. LL. M.

GEORGE WELLS KNIGHT, PH., D.,

HORACE LAFAYETTE WILGUS, M. SC.,
SECRETARY.

STUDENTS.

SENIORS.

Peter Adams.....Highland
Edmund Frederick Arras.....Columbus
Alfred Parker Biddle.....Wauseon
James Sheperd Brailey.....Wauseon
George Orlando Canaga, A. B.....Scio
Scio College.
Henry Gilroy Cartwright.....Wilmington
Charles Burns Compton.....Coshocton
Carl Henry Curtiss.....Charleston
George Brinton McClellan Eggert.....Massillon
Edwin DeWitt Erskine.....Steubenville
Dudley Hampton Foster.....Omega
Simon Grossner.....Columbus
Oscar Elmore Halterman, B. S.....Beaver
National Normal University.
Lyman Harrison Innis, A. B.....Columbus
William Henry Innis.....Columbus
George Ellsworth Jackson.....Zanesville
Harry Prior Junk.....Austin
Charles Adison Lude.....Woodsfield
John Valentine Maier, B. S.....Edon
Northern Indiana Normal School.
William Sidney Merrell.....Coshocton
James Audley McLaughlin, A. B.....Adena
Monmouth College. Ill.
John Thomas Miller, A. M.....Delaware
Ohio Wesleyan University.
Theron Butler Miller, B. L.....Columbus
Cornell University.
William Lawrence Miller.....Trebins
Perry Okey.....Columbus
Frank Etherington Pomerene, Ph. B.....Coshocton
Lawrence Randolph Whetzel Pugh, Ph. B.....Columbus
Merrill Ulysses Ricketts, A. B.....Columbus
Ohio Wesleyan University.
Chilion Newell Robbins.....Franklin
Harry Wildon Robinson.....Jackson Center
Jacob Schlesinger.....Columbus
James Reverdy Selover.....Delaware
Augustus Theodore Seymour.....Columbus
James Edward Snyder, A. B.....Burbank
Wooster University.
Roy Spencer, B. L.....Mt. Pleasant, Pa.
Wooster University.
Edwin Earle Stewart, A. M.....Clifton
Antioch College.
George L. Stoughton, A. B.....Westerville
Otterbein University.

Carmi A. Thompson, B. Ph.....Ironton
Ross Wetherald.....Findlay
Isaiah Whisler.....McComb
Guy Rulon Williams.....New Vienna
Harry Rush Wilson, A. B.....Bethesda
Mt. Union College.

JUNIORS.

George Washington Bope.....Pleasantville
Harry Frank Brand.....Worthington
Sparks Lyon Brooks.....Champion, Pa.
Charles H. Conley.....Marion
Cook Danford.....Bellaire
David Mathias Griffith.....Kecksburg, Pa.
Reynolds Freeman Guerin, A. B.....Columbus
Williams College.
George Limrille Gugle.....Columbus
Charles Thomas Herbert.....Columbus
Frederick H. Heywood.....Columbus
Harry Ellwood King.....Newton Falls
George Ernest Luce, A. B.....Columbus
Ohio Wesleyan University.
Leonard Antony Magruder.....Marietta
Gilbert Manecke.....Fostoria
George Sidney Marshall, B. Ph.....Corning
Henry McLaughlin.....Thornville
Samuel Galloway Osborne.....Columbus
Harold Clapp Parsons.....Mansfield
Edward M. Perse.....Oak Harbor
Edward Thomson Powell, A. B.....Columbus
Ohio Wesleyan University.
Alexander Rogers, B. S.....Bloomingburg
Ohio Wesleyan University.
Lowry Francis Sater.....Sater
Walter Steck Snyder.....Allegheny Pa.

Preparatory Department.

STUDENTS.

George Henry Atkinson.....Columbus
Edward Dow Bancroft.....Columbus
Ralph Hastings Beaton.....Columbus
Andrew J. Biebl.....Gibbon
Leila Biggs.....Columbus
Lolo Rinehart Binkley.....Stella
Philip Earnest Bryant.....South Haven, Mich.
Louise Holderman Bull.....Columbus
Nellie Eliza Carson.....Harrisburg
Margaret Clark.....Columbus
Harry Ernst Clum.....Thornville
Thomas Herbert Dickinson.....Columbus
Ernst Doane Easton.....Springboro
Herman Gamper.....Columbus
Howard Lohr Gardner.....London
Frank William Gruen.....Columbus
Arthur Aden H. Grimm.....Columbus
Ruth G. Griswold.....Worthington
Alvin Devins Harward.....Gahanna
Cora Belle Herd.....Raymonds
Jennie Herrman.....
Sterling William Hubbard.....Columbus
Annie E. Jones.....Columbus
Quinton R. Lane.....Canal Winchester
Harry Levison.....Leipsic
Adolphus Hamilton Lewis.....London
Leslie Mac Lisle.....Columbus
Edgar Hayes Mallow.....Frankfort
John Wesley Mays.....South Point
Charles Curtis McBroom.....St. Marys
Daniel Webster McCarty.....Springfield
Burton McCormic.....Columbus
George Hugh Neiswender.....Grove City
W. R. Nicholas.....Columbus
Mary Seaton Norris.....Columbus
John Bernard Parker.....Danville
Fannie Belle Rife.....Columbus
Mercia Rippeth.....Scio
Zella Robinson.....Columbus
J. H. Round.....Summerfield

Harry Moody Saxbe.....Urbana
Elizabeth Sayler.....Groveport
Lillian Tascher Schaub.....Columbus
Ralph Gilbert Spencer.....Kalida
Lamar Sternberger.....Jackson
John E. Sylvester.....Columbus
Ella E. Underwood.....Columbus
R. S. West.....Columbus
Samuel C. Wetzel.....Dayton
Wilbur G. Worley.....Trotwood

Summary of Students.

COLLEGIATE DEPARTMENT.

Graduate Students		26
Undergraduate Students—		
Four-Year Courses:		
Seniors	83	
Juniors	92	
Sophomores	132	
Freshmen	189	
Special Students	39	
		535
Three-Year Courses:		
Course Preparatory to the Study of Medicine	7	
Course in Pharmacy	46	
Course in Veterinary Medicine	16	
		69
Short Courses:		
Short Course in Agriculture	41	
Short Course in Mining	11	
Course in Clayworking and Ceramics	11	
Course in Dairying	11	
		74
		704

THE SCHOOL OF LAW.

Seniors	42	
Juniors	23	
		65

PREPARATORY DEPARTMENT.

Students	50
	819
Deduct for names counted twice	11
Total	808

Roster of the Battalion.

FIELD AND STAFF.

LIEUT. EUGENE T. WILSON .....Commandant.
R. E. KRUMM .....Lieutenant-Colonel.
R. W. DUNLAP.....Major.
ERNEST SCOTT.....Cadet Captain and Adjutant.
H. L. CONWAY.....Cadet Captain and Quartermaster.
R. W. HOLMES.....Sergeant Major.
E. S. ALDRICH.....Quartermaster Sergeant.
W. E. CLINE .....Battalion Clerk.

COMPANY A.

Captain, C. M. HENRETTA.
First Lieutenant, R. W. KNAUSS. Second Lieutenant, F. F. MARQUARD.

SERGEANTS.

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TURNER, F. L. BOND, C. G.

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HIRSCH, G. CUNNINGHAM, J. F. KING, A. J.

COMPANY B.

Captain, F. MUNDHENK.
First Lieutenant, WM. MCLAUGHLIN. Second Lieutenant, T. J. HOWELLS.

SERGEANTS.

AULD, J. A. SHUCK, C. L. HUMPHREYS, S. M.
GOODMAN, S. J. VOLKMOR, E. L.

CORPORALS.

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WORLEY, G. W. GEORGE, J. C. GALLEN, W. F.

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Captain, J. Q. BROWN.
First Lieutenant, A. MIDDLETON. Second Lieutenant, S. H. Ford.

SERGEANTS.

KUHN, H. W. GRIFFIN, M. H. RIDDLE, H. S.
ALLEMAN, W. E. JENNINGS, L. E.

CORPORALS.

GLENN, J. S. WARDEN, L. C. SNOW, W. A. STRADER, R.
SNIDER, C. M. LOEB, A. E. KILER, A. W.

COMPANY D.

Captain, W. C. O'KANE.
First Lieutenant, M. DONHAM. Second Lieutenant, P. L. COLEMAN.

SERGEANTS.

VAN HORN, J. C. WATT, C. W. BAHIN, J. M.
MILLER, C. J. JONES, W. R.

CORPORALS.

ROHR, E. T. GARRETT, S. G. LITTLE, E. G. BARCUS, M.
MINKLER, G. W. FRENCH, F. M. HOFFMAN, G. W.

BATTERY.

Second Lieutenant, S. R. SHARTS.

Sergeant, C. A. JEROME.

Corporal, L. R. KRUMM.

BAND.

First Lieutenant, Leader, G. W. BOPE.

Sergeant Drum Major, C. W. MCGUIRE.

Alumni.

The Faculty of Ohio State University are anxious to place a copy of each annual catalogue in the hands of every graduate. They will esteem it a favor if any alumnus who changes his residence will notify the Secretary of the Faculty of his new address and occupation. They will also be grateful for any information from any source, that may assist in making or keeping the Directory of the Alumni complete and correct.

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Addison, Louis Granville, 1892, LL. B., Columbus, O., attorney-at-law, Nash, Lentz & Co.
Aldrich, Chester H., 1888, B. A., LL. B., David City, Neb., attorney-at-law.
Alexander, St. Clair, 1893, M. E., Bridgeport, O.
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Anderson, James T., 1884, B. A., Colorado Springs, Col. 1st lieutenant U. S. Army.
Armstrong, William H., 1890, G. Ph., Marysville, Ohio, druggist.
Arnold, Charles Lincoln, 1890, B. Sc., 1894, M. Sc., Eleventh avenue, Columbus, O., assistant in mathematics, Ohio State University.
Atkins, G. Glenn, 1888, B. A., Greenfield, Mass., pastor Congregational Church.

B

Backhaus, Henry Ward, 1894, B. A., New Bremen, O.
Bagley, Anna Gertrude, 1894, G. Ph., Columbus, O.
Baker, William Hollister, 1892, B. Agr., Farmersville, Mo., farmer and stock raiser.
Ball, Fred S. 1888, B. Ph , Montgomery, Ala., attorney-at-law.
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Bates, Josephine M., 1881, B. Ph.. Mrs. Florizel Smith, Columbus, O.
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Bentley, William Preston, 1885, B. Agr., (B. A. 1890, M. A. 1893, Bethany College), 15 Miller Road, Shanghai, China, missionary.
Bissing, William, 1893, M. E., Washington, D. C., patent office.
Blakiston, Mary, 1893, B. Ph., Mt. Vernon, O., teacher in high school.
Blinn, Ray S., 1893, B. S., Chloride, N. M., engineer.
Bloom, Edwin M., 1893, B. Sc., Cooney, New Mexico, Silver Creek Mining Co.
Bloom, J. George, 1889, C. E., Cincinnati, O., assistant engineer, B. and O. S. W. R'y.

Bloomfield, Lloyd Morris, 1891, B. Agr., 186 Ninth ave., Columbus, O., assistant in agricultural chemistry, Ohio State University.
Bogue, Ernst Everett, 1894, B. Sc., Orrwell, O.
Bone, John H., 1893, B. Sc., McConnelsville, O., farmer.
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Brown, Frederick W., 1888, E. M., Bellefontaine, O., superintendent Buckeye Portland Cement Co.
Brown, Newton H., 1893, M. E., Columbus, O., assistant in physics, Ohio State University.
Burns, James Ferguson, 1891, C. E., Guthrie, Ky., assistant engineer L. & N. R. R.
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C

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Chamberlain, Helena W., 1884, B. A., Mrs. Ellis Lovejoy, Union Furnace, O.
Charters, William Filson, 1887, B. Ph., Sidney, O., tax inquisitor.
Cherryholmes, W. K., 1881, B. Sc., M. D., Hamilton, O., physician.
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Clum, George V., 1893, B. A., Mendota, Ill., principal scientific department, Mendota College.
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D

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E

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F

Fairchild, Harmon Scott, 1894, LL. B., Springfield, O.

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H

Hagler, Howard, 1889, B. Sc. Washington C. H., O., farmer.
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Hannum, William Hamilton, 1887, B. A., care of American Presbyterian Mission, Kolhapur, S. M. C., India, missionary.
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Harrison, Warner, 1892, LL. B., E. Town street, Columbus, O., attorney and solicitor, C., A. & C. Railway.
Harrison, William Henry, 1885, C. E., Anaconda, Montana.
Hartwell, Arthur, 1888, M. E., Pittsburg, Pa., electrical engineer, Westinghouse Electrical and Manufacturing Co.
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Heath, Arthur T., 1887, G. Ph., Harbor, O., analytical chemist.
Hedges, Harry, 1888, B. A., Grand Forks, N. Dakota.
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Herrick, Louise, 1893, B. A., Dresden, O., teacher in high school.
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Hill, Frank E., 1886, B. Sc., M. D.
Hine, James S., 1893, B. Sc., 1349 Hunter street, Columbus, O., superintendent of the gardens, Ohio State University farm.
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Houston, Anna Christine, 1892, B. Ph., Marysville, O.

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Hunt, William Franklin, 1887, M. E., St. Paul, Minn., attorney-at-law.
Hyde, Wilby Grimes, 1887, B. A., (LL. B., Cincinnati), rooms 3 and 4 Carlisle block, Chillicothe, O., attorney-at-law.

I

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*Jones, A. A., 1886, C. E.. died May, 1894.
Jones, Aaron Wesley, 1891, B. Sc., 548 E. Long street, Columbus, O., Gardner Insurance Agency.
Jones, Daniel D., 1893, G. Ph., Gallipolis, O., pharmacist, epileptic hospital.
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Jones, Pearl N., 1892, M. E., Pittsburg, Pa., Westinghouse Electrical and Manufacturing Co.
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K

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Marshall, George Sidney, 1894, B. Ph., Columbus, O., law student, Ohio State University.
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Martin, Percy, 1892, M. E., with Ludw, Loewe & Co., Martinikenfelde, Kaiserin Augusta Allee, Berlin, N. W., Germany.
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Mason, George F., 1890, G. Ph., Minneapolis, Minn.
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McCulloch, George Elmer, 1891, B. Sc., Auburn, Ind., law student.

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P

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Index.